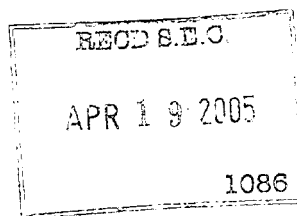


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2004 Annual Report

TEST &
VERIFY

XIA

Network Testers

Ixia is a leading, global provider of high performance IP network testing solutions that measure the performance, functionality, and conformance of networks and the devices attached to them, as well as the applications that run over them.

Value Creation We are building strong momentum as a preferred provider of advanced IP testing solutions. We will leverage that momentum in every facet of our business to create new revenue opportunities, grow our cash flow, and build enterprise value. Given our position in the industry, the quality and relevance of our technology and product solutions and our financial strength, we are optimistic about our opportunity to build value in the coming year.

Revenues (dollars in millions)

2003	2004	2005	2006	2007	2008	2009	2010
21.8	24.0	24.6	25.0	24.9	26.8	30.1	35.2

Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
03				04			

Operating Margin

	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
GAAP	7%	12%	12%	11%	14%	17%	20%	24%
Non-GAAP	13%	15%	18%	19%	19%	22%	24%	27%

	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2004								

Diluted Earnings per Share

GAAP	\$ 0.02	0.04	0.04	0.04	0.05	0.06	0.07	0.11
Non-GAAP	\$ 0.04	0.04	0.05	0.06	0.06	0.07	0.09	0.11

	Q2	Q3	Q4	Q1	Q2	Q3	Q4
\$				04			

in thousands (except for per share and employee data)	2003	2002
Net revenues	\$ 83,533	\$ 47,594
Gross margin percentage	77.7%	86.8%
Net income	8,704	3,410
Diluted earnings per share	0.14	0.06
Diluted weighted average shares outstanding	62,227	60,609
Non-GAAP net income*	12,096	10,083
Non-GAAP diluted earnings per share*	0.19	0.17
Cash equivalents and investments	\$ 121,923	\$ 122,221
Total assets	165,018	157,661
Total shareholders' equity	107,054	149,167
Net cash from operating activities	17,668	14,222
Employees at year end	267	293

*Includes the effects of stock-based compensation and amortization of intangible assets. See reconciliation of GAAP to Non-GAAP net income and diluted earnings per share below.

in thousands (except per share data)	2003	2002
Non-GAAP net income	\$ 12,096	\$ 10,083
Amortization of intangible assets	(2,663)	(2,618)
Stock-based compensation	(1,919)	(5,309)
Income tax effect	1,169	1,259
GAAP net income	\$ 8,704	\$ 3,410
Non-GAAP diluted earnings per share	\$ 0.19	\$ 0.17
Amortization of intangible assets	(0.04)	(0.04)
Stock-based compensation	(0.08)	(0.09)
Income tax effect	0.02	0.02
GAAP diluted earnings per share	\$ 0.14	\$ 0.06

To Our Shareholders,

2004 was a break-out year for Ixia, as revenues and profits reached record levels. We dramatically expanded our product line to address new markets, while deepening the functionality and technology leadership of our core product offering. To complement our continued innovation, we bolstered our sales and marketing effort by expanding geographically and by targeting certain vertical markets. The success of these efforts was reflected in consistently improving financial results, and we have now posted 27 consecutive quarters of profitability; while at the same time, we have continued to invest heavily in our future both through expanding research and development and through highly selective acquisitions. With the improvement in IT spending in late 2004, we enter 2005 a stronger company with what we expect will be a rapidly growing addressable market.

In 2004, revenues increased 40% to \$117 million from the prior year, with growth accelerating in the second half of the year. While continuing to build our infrastructure to enable future expansion, we were able to grow our bottom line at a faster rate than our top line with a 117% increase from the prior year in GAAP net income to \$18.9 million, or \$0.29 per diluted share. Our strong performance in 2004 concluded with record fourth quarter revenues of \$35.2 million and GAAP net income of \$0.11 per diluted share.

Our success demonstrates Ixia's clear market leadership in IP network testing by delivering superior performance and scalability. Our open, multi-purpose, multi-user platform and the depth of our testing applications have enabled us to grow our business within our core network equipment manufacturers customer base, while expanding our sales to new customers. In 2004, we sold our products to over 245 new customers, ranging from large multi-national enterprises to government agencies and tech start-ups, while also increasing sales to our largest customer – Cisco Systems – by 53%.

The success we experienced in expanding our customer base and growing our business was primarily driven by a number of fast growing product areas and expansion in geographic markets. These include:

- Increased features and expanded utilization of our TXS Load Modules, which integrate a dedicated CPU per test port
- Rapid adoption of 10 Gigabit per second Ethernet technology in networks
- Continued growth of software sales and expansion of our existing customer base
- Expansion into key vertical markets, including the government and enterprise markets
- Bolstering the Company's presence in international markets

One Gigabit per second Ethernet TXS Load Modules were our most successful product line in 2004 and eclipsed \$10 million in sales in the fourth quarter for the first time in the Company's history. These load modules combine wire speed Layer 2-3 traffic generation with true Layer 4 through Layer 7

session emulation. Every port features a powerful RISC processor, running the Linux operating system, and a full suite of protocols, including a TCP/IP stack. This architecture provides unprecedented performance and flexibility for testing a whole range of content aware devices that require both upper layer protocol emulation and simultaneous wire-speed packet generation.

As 10 Gigabit Ethernet technology began to be more widely adopted by carriers and large enterprises in 2004, we experienced an even more aggressive ramp up in sales of our 10 Gig products than we had experienced in the past with other technologies, like 1 Gigabit Ethernet. As a Charter Member of the 10 Gigabit Ethernet Alliance, Ixia has long been involved in promoting standards-based 10 Gigabit Ethernet, and we have developed the industry's most comprehensive 10 Gig product family. We have recently added to this family by introducing the highest density 10 Gigabit Ethernet test platform available today. The new 6 port, 10 Gigabit Ethernet Load Module for our innovative Optixia chassis provides 1.2 Terabit per second total bandwidth in a single test platform. This capability was developed to meet demand from network equipment manufacturers, and carriers that are accelerating the deployment of 10 Gigabit Ethernet technology and services. Early adoption of the Optixia 10 Gigabit Ethernet solution has already begun in Asia with a shipment to a large national carrier that is rolling out a mix of complex data, voice, and video services.

Helping drive our hardware sales in both 1 Gig and 10 Gig technology has been the rapid growth of our test software sales. Software is a great door-opener into new accounts for Ixia. For example, a significant portion of our 2004 orders included our IxChariot software product. In late 2004, we started the migration to an integrated, modular software product development model that will substantially decrease the time to market for future, more robust software products. Our new software product lines are notable for their high performance, functionality, and ease of use with a Windows™ look and feel. In addition to IxChariot, we had record performances from our IxANVL software product line of conformance testing tools, and from our routing protocol testing software.

The growth of our software product lines has been instrumental in our expansion into the enterprise and government markets. A primary focus of this expansion has been large, multi-national customers that are upgrading their networks to support new services, such as Voice over IP, and other bandwidth-intensive services. These customers, which include companies as diverse as Priceline.com, GE, and Merrill Lynch, demand exceptional network performance and are using Ixia to perform robust testing before they deploy major additions or changes to their networks. While our continued success bodes well for the future, we are still ramping this effort and will continue to focus on new vertical market opportunities to grow our presence in the enterprise market.

One such vertical market that has galvanized our sales and marketing efforts is the government market. In late 2003, we started building a dedicated government sales team to focus on this market, which is notable for both long sales lead times and long term customer loyalty. Our success over the past year has been notable with many government agencies who run large networks, like the Department of Defense, Department of Transportation, and Space and Naval Warfare Systems Command (SPAWAR), all buying Ixia equipment in 2004. This growth was complemented by increasing sales to defense contractors such as Boeing, Lockheed Martin and Northrop Grumman.

A key area of focus for 2005 will be the carrier market. Both IP and Ethernet technologies are migrating from the Enterprise and Internet to purpose-built, "utility-grade" IP-based communication networks. These networks, referred to as "carrier networks," are run by cable, wireline, and wireless operators and require a significant level of testing to assure the reliable provision of triple-play traffic - data, voice, and video over IP. Carriers are also requiring that their equipment vendors more rigorously and more comprehensively test their routers and equipment for these new services.

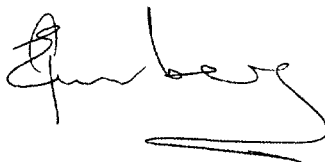
Along with positive trends in the carrier market, we are continuing to expand our product base into new areas that map closely with emerging industry trends, such as Metro Ethernet, Network Security, and IPv6 technology. These efforts will be complemented by continuing innovation in our core product areas, where we are emphasizing both technology leadership and increasing the reliability of our products. We expect to further supplement our strong internal R&D effort with targeted acquisitions of focused technology companies. An excellent example of such a targeted acquisition was our purchase of G3 Nova in February of 2004. We integrated G3 Nova's Voice over IP product line into our sales efforts, complemented with additional sales specialists, launching IxVoice shortly following the completion of the acquisition, and quickly integrated the Romanian based development team into our product development strategy. The IxVoice product serves a direct need of our core customer base for robust Voice over IP and telephony testing.

Our acquisition of G3 Nova also helped us achieve another of our goals for 2004, the reduction of R&D spending as a percentage of revenues. After the acquisition, we added several engineering teams in Romania that we have aggressively expanded over the last 12 months, extending Ixia's product development capabilities. At the same time, we have continued to selectively increase our engineering team in California and are building a direct research and development effort in India. These efforts have allowed us to grow our R&D effort, while decreasing R&D spending as a percentage of sales from 23% in the first quarter to less than 20% in the fourth quarter of 2004. Moving forward, we believe that our strong and sustained commitment to increasing R&D efforts will continue to be integral to our growth.

Complementing our focus on R&D, we continue to expand our international sales organization. During the year, international sales increased by 22%, and we made significant in-roads into new markets. We have revamped much of our distributor network in countries like Australia, Israel, Italy, and Sweden, while building out direct teams in key markets, such as China, Japan, India, and the United Kingdom.

Moving forward, we are optimistic that the progress and investments we made in 2004 have created a solid basis for continued growth. In 2005, we will continue to concentrate on introducing new products, investing in R&D, and focusing on delivering strong bottom line results. I'd like to offer my sincere thanks to our employees, directors, advisors, partners, customers and shareholders for their tremendous ongoing support during the past year. We look forward to updating you on our progress in the coming year.

Sincerely,

A handwritten signature in black ink, appearing to read "Ginsberg", with a long horizontal flourish underneath.

Errol Ginsberg
President and Chief Executive Officer

President and Chief Executive Officer



Test and Verify All companies test their products. World-class companies know that high quality is a true competitive advantage. So they build good processes for test and measurement to reduce defects, to characterize the performance envelope of their products and services, and to get them to market faster. Ixia's solutions enable this competitive advantage.

Hardware Engineer



A Culture Of Innovation What are the requirements for innovation? In the domain of high-technology, certainly one prerequisite is a deep, technical understanding of what is possible... coupled with the intense desire to extend the very limits of possibility. Another requisite is vision – the ability to see through the landscape of common opportunities and identify the one uncovered gem whose brilliance was unrecognized by others.

"As an engineering company, we're focused on developing comprehensive strategies for managing projects from the first white board sketches to final build and deployment. We know that effective project management produces high quality products and speeds our time to market."

Engineering Project Manager



Product Line Manager



Or perhaps innovation can be measured in patents or trademarks alone. If so, then Ixia's ability to innovate has been validated numerous times since the company was founded. And Ixia's financial performance over its brief history does indeed suggest that a fiery furnace of industry-leading engineering excellence, aligned with professional marketing and world-class sales is burning brightly.

Continuously striving to deliver new products and services, Ixia is constantly reviewing competitive and emerging technologies to create products that deliver the best performance. Our engineering excellence and our sales and marketing prowess are the key to our success.

Yet all of this capability means very little without the executive leadership necessary to inspire a team of experts who can not only carry out the initial innovative vision, but who are true contributors to it, able to constantly refine it, perfect it, and provide the ongoing ingenuity and energy to reinvent it. And at Ixia, Executive Management has carefully built such a team, and created a true culture of innovation that shepherds individual excellence while it fosters collective contributions.

Tech Support and Training



IT Network Manager



And there is one more element to innovation that may be more important than all others combined, and this is the spirit of the entrepreneur, such a spirit is imbued with the desire to excel, with a determination and attitude that refuses to settle for last year's or even last week's accomplishments. Such a spirit welcomes the challenge of reaching the next goal, and the goal beyond that... the one that will always be just out of reach.

...in our competitive environment, it is essential that we continue to innovate and improve our products and services. We must always be looking for ways to reach the next goal, the goal beyond that... the one that will always be just out of reach.

At Ixia, we call this goal the next best
step. And we know there are many
goals ahead. Challenging us to
work harder, to move faster. Challenging
our creativity to innovate, and inspir-
ing us to succeed. And we look forward
to such challenges. Indeed, we thrive
on them. At Ixia, we are determined
to produce the very best performance
products not only a culture of
innovation can create.

Software Engineering Director





Terrol Ginsberg	Robert W. Bass	David Anderson
<i>President and Chief Executive Officer</i>	<i>Executive Vice President Operations</i>	<i>Senior Vice President Worldwide Sales and Business Development</i>



Cliff Hannel	Alan Amrod	Tom Miller
<i>Vice President Operations and Strategy</i>	<i>Vice President Marketing</i>	<i>Chief Financial Officer</i>



Victor Alston	Walker Colston	Doug Schafer
<i>Vice President Operations Development</i>	<i>Vice President Engineering Operations</i>	<i>Vice President Engineering Platforms</i>

Form 10-K

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

(Mark One)

☒ [X]

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2004

OR

☐ []

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 000-31523

IXIA

(Exact name of Registrant as specified in its charter)

California

95-4635982

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

26601 West Agoura Road, Calabasas, CA 91302

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (818) 871-1800

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act: Common Stock, without par value

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ [X] No ☐ []

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒ [X]

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes ☒ [X] No ☐ []

The aggregate market value of the shares of the Registrant's Common Stock held by nonaffiliates of the Registrant as of June 30, 2004, computed by reference to the closing sales price on the Nasdaq National Market on that date, was approximately \$281,242,596.

As of March 1, 2005, the number of shares of the Registrant's Common Stock outstanding was 64,075,135.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement to be delivered to shareholders in connection with their Annual Meeting of Shareholders to be held on May 19, 2005 are incorporated by reference into Part III of this Annual Report.

IXIA

FORM 10-K

Table of Contents

	Page
PART I	
Item 1. Business	3
Item 2. Properties	14
Item 3. Legal Proceedings	14
Item 4. Submission of Matters to a Vote of Security Holders	14
PART II	
Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Registered Securities	15
Item 6. Selected Financial Data	15
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	17
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	33
Item 8. Financial Statements and Supplementary Data	33
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	33
Item 9A. Controls and Procedures	34
Item 9B. Other Information	34
PART III	
Item 10. Directors and Executive Officers of the Registrant	34
Item 11. Executive Compensation	34
Item 12. Security Ownership of Certain Beneficial Owners and Management	35
Item 13. Certain Relationships and Related Transactions	35
Item 14. Principal Accountant Fees and Services	35
PART IV	
Item 15. Exhibits and Financial Statement Schedules	35
SIGNATURES	37

PART I

Item 1. Business

Overview

We are a provider of technology and systems that allow our customers to test and measure the performance, functionality, and conformance of Internet Protocol (IP) equipment and networks, and the applications that run over them. Our solutions generate, capture, characterize, and analyze high volumes of realistic network band application traffic, exposing problems, assessing performance, and verifying conformance to industry specifications. We offer a single hardware platform with interchangeable interfaces, utilizing a single set of applications and Application Programming Interfaces (APIs) which allows our customers to create a fully integrated, easy-to-use test bed. The networks our systems analyze include Ethernet networks operating at speeds of up to 10 gigabits per second, which carry data traffic over optical fiber or electrical cable. Other networks include Packet over SONET networks operating at speeds of up to 10 gigabits per second which transmit information over high-speed optical links and Asynchronous Transfer Mode (ATM) networks, operating at speeds of up to 622 megabits per second. Our telephony test suite is used to test and verify traditional Time-Division Multiplexing (TDM) voice based networks and Voice over IP technology, devices, and systems. Our customers also use Ixia's performance applications to test and verify web, Internet, security, and business applications.

For the year ended December 31, 2004 we have sold to over 535 existing and new customers and our Ethernet interface cards accounted for 65.6% of our net revenues. Based on revenues, for the year ended December 31, 2004, significant customers by category included:

- Leading network equipment manufacturers such as Cisco Systems, Hewlett Packard, Extreme Networks, Alcatel, and Nortel Networks;
- Semiconductor manufacturers such as Intel, Broadcom, Texas Instruments, Motorola, and Agere;
- Telephony equipment manufacturers such as Ericsson, Cisco Systems, and Panasonic;
- Internet and network service providers such as NTT, AT&T, Verizon, Comcast, and Level 3;
- Enterprises such as Merrill Lynch, Ford Motor Company, Microsoft, Boeing, and Lockheed Martin; and
- Government departments and agencies such as Defense Information System Agency (DISA), Joint Interoperability Test Command (JITC), U.S. Army Technology Integration Center (TIC), The Pentagon, and Space and Naval Warfare Systems Command (SPAWAR).

As service providers migrate to next generation networks and global communications become increasingly IP-based, we intend to expand our business to meet the growing demand for sophisticated network and application test solutions. Key areas of growth include 10 gigabit Ethernet, Voice over IP, security, enterprise traffic emulation, Web-based application testing, Metro Ethernet, and converged voice, video and data services to the home. We intend to maintain our focus on technology leadership, expand and further penetrate our customer base, acquire new key technology and expand our international presence.

The Increasing Need for Network and Application Testing and Measurement

The measurement and analysis of performance, functionality, and conformance of networks, applications, and communication devices is important to the following groups:

- *Equipment Manufacturers.* To meet the higher standards specified by network operators and network users, equipment manufacturers who provide infrastructure equipment and systems must ensure the quality of their products during development and manufacturing and prior to shipping. Failure to ensure the consistent performance of their products may result in the loss of customers, increased research and development costs, customer service charges and losses resulting from the return of products.
- *Communications Chip Manufacturers.* Communications chip manufacturers require equipment to evaluate and analyze the performance of their chips during the design and development phase.

- *Telephony Equipment Manufacturers.* Telephony equipment manufacturers provide devices and infrastructure equipment and must ensure not only the quality of their products during development and manufacture, but also the conformance of their products to strict industry standards. This is critical for interoperability between various vendors' equipment, as well as to ensure that traditional TDM based voice networks operate in conjunction with IP based technologies such as Voice over IP.
- *Internet and Network Service Providers.* Internet and network service providers seek to provide network users with the high quality network services they demand. Failure to provide satisfactory service can be costly and may result in the loss of customers. To ensure desired service levels are met, Internet and network service providers must verify the performance and conformance of network equipment during the product and systems selection process prior to deployment.
- *Network Users.* Network users such as large businesses increasingly use specialized systems in order to verify that they are receiving the level of service that they have contracted to receive from Internet and network service providers. They also increasingly use these systems to measure the performance of their own networks before new equipment or applications are deployed in the network.
- *Government Agencies.* Government departments and agencies depend on test solutions to perform qualification and pre-deployment testing of network systems, protocols, and software applications running on their networks.

Characteristics Demanded of Network and Application Test and Measurement Equipment

As networks and network devices become increasingly more sophisticated, the need for performance, functionality, and conformance testing is becoming increasingly important. Network testing solutions must also be highly scalable and capable of generating and analyzing large amounts of data at high speeds over increasingly complex configurations. Comprehensive, integrated testing must occur throughout network design, development, production, deployment and operation stages. Because this testing and verification must take place across multiple layers of the network infrastructure and for all network protocols, network testing solutions are also required to be highly flexible and modular. This rapid evolution of complex network technologies and protocols, including next generation technologies such as 10 Gigabit Ethernet, Metro Ethernet, Voice over IP, and Video over IP has resulted in the need for an integrated, single platform solution that is easy to use with minimal training and setup.

The Ixia Solution

We are a provider of technology and systems that allow our customers to test and measure the performance, functionality, and conformance of Internet Protocol (IP) equipment and networks, and the applications that run over them. Our solutions generate, capture, characterize, and analyze high volumes of realistic network and application traffic, exposing problems, assessing performance, and verifying conformance to industry specifications. The networks our systems analyze include Ethernet networks operating at speeds of up to 10 gigabits per second, which carry data traffic over optical fiber or electrical cable. Other networks include Packet over SONET networks operating at speeds of up to 10 gigabits per second which transmit information over high-speed optical links and Asynchronous Transfer Mode (ATM) networks, operating at speeds of up to 622 megabits per second. Our telephony test suite is used to test and verify traditional Time-Division Multiplexing (TDM) voice based networks and Voice over IP technology, devices, and systems. Our customers also use Ixia's performance applications to test and verify web, Internet, security, and business applications. Ixia offers a single hardware platform with interchangeable interfaces, utilizing a single set of applications and Application Programming Interfaces (APIs) which allows our customers to create a fully integrated, easy-to-use test bed.

Our systems provide the following key benefits to our customers:

High Performance. Our systems generate and receive data traffic at wire speed, which is the maximum rate that data traffic can be transmitted over the network. Our systems provide accurate analysis across multiple layers of the overall network and of individual network components in real-time, that is, as the transmission is actually occurring. Our systems can be configured to either generate packets of data, to group those packets into sessions, or to generate pseudo random binary sequences.

When configured to generate packets of data, our systems analyze each discrete packet of information, thereby allowing our customers to precisely measure the performance of their networks and individual network components. This precision allows customers to accurately measure critical quality of service parameters such as throughput, latency, loss and jitter and to check data integrity and packet sequence throughout the network, as well as to locate various network problems.

When configured to group packets of data into meaningful sessions, or conversations between computers, our systems emulate highly complex and specialized applications such as those used to transfer electronic mail, browse the Internet and manage databases. This emulation allows our customers to accurately measure critical characteristics of their networks such as session setup rate, session tear down rate and session capacity. When configured to generate pseudo random bit streams, our systems analyze each individual bit to measure the bit error rate of test sequences, thereby allowing our customers to precisely measure critical physical transport characteristics of their networks. Our systems also allow users to precisely repeat complex test scenarios in order to evaluate the impact of changes made to network equipment and systems.

Highly Scalable. Each of our interface cards provides one or more ports through which our systems generate and receive data traffic. Each physical port contains its own dedicated logic circuits, with no shared resources. Our customers can easily scale the size of their test or the amount of data traffic generated by inserting additional interface cards. By connecting multiple chassis and synchronizing up to thousands of ports to operate simultaneously, our customers can simulate large-scale networks. We believe that our systems offer our customers the highest port density and therefore the most scalable systems available. In addition, our client-server architecture allows multiple users in the same or different geographic locations to simultaneously access and operate different ports contained in the same chassis.

Highly Customizable. Each of our current generation of interface cards includes a microprocessor for each interface port. This microprocessor uses the LINUX operating system, enabling Ixia to rapidly develop test applications and to recompile code from our partner companies or acquisitions for use on the Ixia platform. In addition, our users can run their existing software applications on their Ixia hardware, or write new software applications for it. We believe that the use of this open and well-known operating system makes it easy for our customers to customize their performance analysis systems to their specific needs.

Single Hardware Platform. Our solution operates on a single hardware platform with interchangeable interfaces, utilizing a single set of applications and Application Programming Interfaces (APIs). This architecture offers our customers a fully integrated test bed which increases productivity and reduces training requirements. Ixia's architecture enables the emulation of millions of network users on a single scalable platform, with a mixture of both network and application layer traffic.

Highly Modular. Our hardware products consist of stackable and portable chassis, which, depending on the chassis model, can be configured with any mix of up to 16 of our interface cards. This modular design allows our customers to quickly and easily create complex and custom test configurations. Our systems also allow for the convenient integration of additional network technologies into existing systems through the addition of specific interface cards.

Flexibility. Our customers can easily reconfigure our systems to address changing technologies, protocols and applications without changing system hardware or replacing interface cards. For example, a customer can reconfigure our systems through software changes downloaded from our web-site. A customer might download these changes to test new network protocols or types of equipment.

Open Architecture. Our open architecture allows our customers to quickly integrate technologies into our unified platform. Our customers use our APIs and Software Development Kit (SDK) to centrally manage, protect, automate, and extend their customized testing methodologies.

Ease of Automation. Our systems make it easier to create automated tests that can run unattended on nights, weekends, and holidays. We offer our customers a library of automated tests that simplify and streamline the test process. These tests are repeatable and the results are presented in a structured format for easy analysis. Ixia's Tool Command Language (Tcl) Application Programming Interface (API) is a comprehensive programming interface to the Ixia hardware, as well as to Ixia software applications. The Tcl API enables libraries of automated tests to be quickly built with specificity to a customer's environment. We also offer a utility that exports configurations created in Ixia's graphical user interface (GUI) as Tcl scripts.

Ease of Use. We have designed our systems so that users can install and operate them with minimal training and setup. Our systems are easy to use and offer our customers a wide range of readily accessible pre-designed test configurations. These tests include industry standard and application-specific tests. Users can easily configure and operate our systems to generate and analyze data traffic over any combination of interface cards or ports through our graphical user interface that features a familiar Microsoft Windows point-and-click environment. Our systems also support the commonly used Tool Command Language (Tcl) for programming, which allows users to create custom and automated testing applications tailored to meet their specific requirements.

Strategy

Our objective is to be the industry leader in providing performance, functionality, and conformance testing solutions for IP networks and IP based services. This includes next generation technologies such as 10 gigabit Ethernet, Metro Ethernet, Voice over IP, and Video over IP. Key elements of our strategy to achieve this objective include the following:

Continue to Expand Our Addressable Markets. We plan to further expand our addressable markets into areas of network growth, such as content-aware routing and switching, secure virtual private networks, networks that carry Voice over IP, and next-generation networking technologies. We believe that we can leverage our core competencies in high-speed transmission protocols into leadership positions as these markets expand and mature.

Maintain Focus on Technology Leadership. We intend to continue to focus on research and development in order to maintain our technology leadership position and to offer performance analysis systems that address new and evolving network technologies. We intend to maintain an active role in industry standards committees such as the Internet Engineering Task Force and to continue our active involvement in industry forums such as the Metro Ethernet Forum. We also plan to continue to work closely with customers who are developing emerging network technologies, including Cisco Systems, Hewlett Packard, NTT, Alcatel, and Nortel Networks, as well as leading edge start-up companies, to enhance the performance and functionality of our existing systems and to design future products that specifically address our customers' needs as they evolve.

Expand and Further Penetrate Customer Base. We plan to strengthen and further penetrate our existing customer relationships, particularly those with network and telephony equipment manufacturers, and to pursue sales to new customers. For example, the U.S. Government, Microsoft, Merrill Lynch, and Ford Motor Company currently use our systems to verify the performance and reliability of network equipment before deployment in their networks. We believe we have the potential to increase sales to enterprise customers as they focus on optimizing their networks for use with their unique applications, as well as maximizing their return on investment from existing networks by utilizing our suite of network application verification products. We plan to strengthen our customer relationships and to expand our customer base by:

- Continuing to develop and offer new and innovative systems that meet our existing and potential customers' needs;
- Expanding our sales and marketing efforts; and
- Building upon and further strengthening our reputation and brand name recognition.

We also plan to continue our focus on customer support by maintaining and expanding the capabilities of our highly qualified and specialized internal customer engineering group. This group of technically trained professionals provides our customers with support and assistance, including assistance with their performance validation requirements and available on-site training and support.

License and Acquire Key Technologies. We plan to continue our strategy of acquiring key technologies that expand our product offerings, address customer needs, and enhance the breadth of our evolving product portfolio. Any such acquisitions may be made in the form of partnering with industry leaders, acquiring or licensing technology assets associated with product lines, or acquiring other companies. In February 2004, we acquired all of the outstanding capital stock of G3 Nova Technology, Inc. ("G3 Nova") which develops and sells voice and Voice over IP test tools. In December 2004, we announced the acquisition of the remaining assets and unrestricted, global rights to Chariot®, the application emulation testing product line from NetIQ, effective January 1, 2005.

Expand International Market Presence. We plan to pursue sales in key international markets, including Europe, the Middle East and Africa and the Asia Pacific region. In order to pursue sales in these markets, we intend to continue to develop and expand our relationships with key customers and distributors. In 2004, we expanded our sales and support team in Europe, Israel, and China and plan further expansion in these areas in 2005.

Products

Our product line is made up of network traffic generation and performance analysis systems that simulate large-scale networks and of stand-alone software applications that allow our customers to verify the functionality and conformance of their products to industry standards. Our systems consist of interchangeable interface cards which fit into a multi-slot chassis. Our chassis are metal cases that incorporate a computer, a power supply and a backplane which connects the interface cards to the chassis. The interface cards generate, receive and analyze data traffic. The software for these systems includes management software and application-specific test suites.

The operator can utilize our analysis systems in either test labs or within networks. Our systems are operated through standard computer peripheral devices. These devices include a monitor, keyboard and mouse. The operator of our systems establishes test parameters for the performance analysis by inputting data using the keyboard and mouse. The operator observes the results of the performance analysis using the monitor and may log results to files for post-analysis or archival.

The operator configures our systems based on the specific interfaces of the network equipment being tested. For example, if the operator wants to analyze the performance of a router with Ethernet interfaces, the operator would insert Ethernet interface cards into our system.

Chassis

Our primary chassis, the IXIA 1600T and the IXIA 400T, are highly scalable and can be configured with any combination of our interface cards. Any mix of up to 256 IXIA 1600Ts and IXIA 400Ts can be linked together and time-synchronized to support a diverse range of complex test configurations. The IXIA 1600T is a 19-inch rack-mountable 16-slot chassis, and the IXIA 400T is a compact portable four-slot chassis.

Our highest port density chassis, the Optixia, can be configured with Gigabit Ethernet interface cards and can be similarly linked together and time-synchronized with other chassis. The Optixia is a 19-inch rack-mountable 10-slot chassis which can support up to 240 ports of 10/100/1000 megabits per second Ethernet.

We also offer the Ixia 250 chassis. The Ixia 250 is an integrated system offering complete laptop computer functionality, including an integrated keyboard, mouse and monitor, with slots to accommodate up to two of our interface cards and an additional built-in 10/100/1000 megabits per second Ethernet test port.

Interface Cards

Each one of our interface cards contains from one to twenty-four independent traffic generation and analysis ports. These ports operate at wire speed, the maximum rate that data traffic can be transmitted over the network. Each port on each interface card has a unique transmit stream engine that is used to generate either packets of information or pseudo random bit streams, and a real-time receive analysis engine capable of analyzing the packets or bit streams as they are being received. The transmit stream engine generates millions of Internet protocol data packets or continuous test sequences at wire speed that are transmitted through the network and received by the analysis engine. When data packets have been generated, the analysis engine then measures throughput, latency, loss and jitter, and checks data integrity and packet sequence on a packet-by-packet basis. When bit streams have been generated, the analysis engine measures the bit error rate of test sequences. In addition, our systems measure the effectiveness of networks in prioritizing different types of traffic. Each of our current generation interface cards also includes a microprocessor per port to generate and analyze sophisticated routing protocols, such as BGP and OSPF, as well as application traffic such as TCP/IP, HTTP and SSL.

The following tables describe our optical and electrical interface cards. The "Physical Interface Type" column distinguishes between optical interface cards capable of transmitting data traffic over fiber optic cables and electrical interface cards capable of transmitting data over copper cables. The "Transmission Speed" column identifies the speed at which data is sent out of and received by each port on the interface cards, and the "Number of Ports per Interface Card" column identifies how many ports are contained on a single card.

Interface Cards

Product Families	Physical Interface Type	Transmission Speed	Number of Ports per Interface Card
10 Gigabit Ethernet			
10GBASE-R (LAN)	Optical	10.3 Gbps	1
10GBASE-W (WAN)	Optical	9.953 Gbps	1
XENPAK(with modular fiber-type transceivers)	Optical	10.3 Gbps	1

Product Families	Physical Interface Type	Transmission Speed	Number of Ports per Interface Card
Gigabit Ethernet			
XFP (with modular fiber-type transceivers)	Optical	10.3 Gbps	1
XAUI	Electrical	12.5 Gbps	1
10GUEF-FEC	Optical	11.1 Gbps	1
1000SFPS4 (with modular fiber-type transceivers)	Optical	1.25 Gbps	4
1000TXS4	Electrical	10/100/1000 Mbps	4
1000STXS4	Optical/Electrical	10/100/1000 Mbps	4
ELM1000ST2	Electrical	10/100/1000 Mbps	2
ALM1000T8	Electrical	10/100/1000 Mbps	8
PLM1000T4-PD	Electrical	10/100/1000 Mbps	4
OLM1000STXS24	Electrical	10/100/1000 Mbps	24
OLM1000STXS24	Electrical	10/100/1000 Mbps	24
Ethernet and Fast Ethernet			
100TXS8	Electrical	10/100 Mbps	8
Packet over SONET/SDH			
OC-12c/3c	Optical	622/155 Mbps	2
OC-48c	Optical	2.488 Gbps	1
OC-192c	Optical	9.953 Gbps	1
ATM			
OC-12c/3c	Optical	622/155 Mbps	2
Bit Error Rate Testing			
OC-48c	Optical	2.488 Gbps	1
OC-192c	Optical	9.953 Gbps	1

System Management Software

Our systems are managed through graphical user interfaces which allow users to configure our chassis and interface cards in order to generate and analyze traffic. Each port can be independently configured to meet specific testing requirements and results can be viewed using both tables and graphs. We also allow users to create custom and automated test applications tailored to meet their specific requirements using the commonly used Tool Command Language (Tcl) programming environment.

Application Specific Test Suites

We have a large suite of software applications that measure and analyze the performance, conformance and functionality of networks, network equipment and applications that run on these networks. These measurements enable network equipment manufacturers, enterprises, Internet and network service providers, governments, and enterprises to evaluate the performance of their equipment during design, manufacture, and before the equipment is deployed in a network. Our application-specific test suites include the following:

IxAccess Performance Application. Ixia's IxAccess Performance Application offers performance and scalability analysis of Internet and network edge aggregation equipment. The IxAccess Performance Application emulates PPPoX client sessions with data traffic greatly simplifying testing by eliminating the need to configure thousands of individual clients. The IxAccess Performance Application is supported on the current generation of our Gigabit Ethernet and 10/100 megabits per second Ethernet interface cards and the ATM interface card.

IxANVL — Automated Network Validation Library. The IxANVL test suite validates the protocol implementations and operational robustness of networking devices by determining how well a network device's protocol implementation adheres to the specifications of a specific protocol. This stand-alone test suite provides functional tests that follow individual statements within protocol specifications to assess conformance, as well as negative tests that check how a product handles badly formatted packets or packets sent in an order other than the specified one.

IxChariot Application. The IxChariot product family offers traffic pattern analysis and decision support tools which emulate real world application data. IxChariot offers application assessment and device testing by emulating hundreds of protocols across thousands of network endpoints as well as by providing the ability to predict the expected performance characteristics of applications running on wired and wireless networks.

IxLoad Application. The IxLoad Performance Application offers a scalable solution to assess the performance of content-aware devices and networks. IxLoad creates real-world traffic scenarios at the TCP (Layer 4 of the OSI model) and application layers (Layer 7) by emulating clients and servers for a variety of protocols including HTTP, SSL, FTP, Mail (SMTP, POP3) and Streaming (RTP, RTSP) protocols. This test suite is supported on the current generation of our Gigabit Ethernet and 10/100 megabits per second Ethernet interface cards and the Application Load Module.

IxRouter Application. Our IxRouter Application offers a complete system for validation of advanced routers that direct data traffic throughout the Internet and are being deployed by Internet service providers. It provides the ability to generate and receive data traffic at wire speed. The Router Tester provides an integrated mix of ATM, Packet over SONET, 10 Gigabit Ethernet, Gigabit Ethernet and 10/100 megabits per second Ethernet interfaces. Utilizing routing protocol emulation software based on IP version 4 and IP version 6 RIP, RIPv2, IS-IS, OSPF, and BGP-4, as well as IP Multicast, MPLS, LDP, RSVP-TE, VPLS, Layer 2 VPNs, and Layer 3 VPNs, our tester can simulate the data traffic of millions of users to automatically configure the routing table within a single router or within a network of routers. Our system thereby provides performance and reliability testing of the router or network of routers in realistic conditions.

IxScriptMate Application. The IxScriptMate Application is a customizable test tool to automate the performance, scalability, and functional testing of network devices. The IxScriptMate Application provides a simple-to-use Graphical User Interface to configure custom automated test scenarios and analyze test results. It offers a suite of pre-built tests based on industry standard RFCs and customer requirements. These suites include Benchmarking Methodology for Network Interconnect Devices (RFC-2544) Test Suite, LAN Switching Devices (RFC-2889) Test Suite, Quality of Service (QoS) Test, and the IP Multicast Test Suite. Test results are collected and presented in various formats including real-time graphs presenting test execution progress, formatted reports for detailed post-test analysis, color-coded indications of test trial pass/fail outcome, and detailed test execution logs. The IxScriptMate Application is written in the commonly used Tool Command Language (Tcl).

IxVoice Voice/VoIP/PSTN Application. Our IxVoice Voice/VoIP/PSTN Application provides a unified VoIP and PSTN test solution. It offers scalable test libraries to addresses common Voice over IP protocols including SIP, SCCP (Skinny), H.323, MGCP as well as TDM and analog telephony services.

IxVPN Performance Application. Ixia's IxVPN Performance Application offers a scalable performance analysis solution for validating the performance of IPsec VPN gateways. The IxVPN Performance Application uses our Encryption Load Module (ELM) which has dedicated security processors. Each port implements a full IPsec and IKE protocol stack and can emulate thousands of Secure Gateways and clients, creating thousands of IPsec tunnels. Using multiple ports, a single Ixia test system can scale to test the large scale IPsec VPN gateways and networks.

Products in Development

We continue to develop our IP network testing and throughout 2005 we intend to remain focused on improving our position in conformance, functional, and performance testing in the following technology areas:

- Gigabit Ethernet
- 10Gigabit Ethernet
- Metro Ethernet
- ATM
- Layer 4 – 7
- MPLS
- Multicast
- IPv6
- Voice over IP
- Video over IP
- IPSec
- SSL
- Denial of Service
- Wi-Fi
- WiMax

We may delay or cancel the introduction of new products to the market as a result of a number of factors, some of which are beyond our control. For more information regarding these factors, see “Business – Research and Development” on page 13 and “Risk Factors – If we are unable to successfully introduce new products to keep pace with the rapid technological changes that characterize our market, our results of operations will be significantly harmed” on page 25.

Technology

The design of all of our systems requires a combination of sophisticated technical competencies, including design of field programmable gate arrays, or FPGAs, which are integrated circuits that can be repeatedly reprogrammed to perform different sets of functions as required. The design of all of our systems also requires high-speed digital hardware design, software engineering and optical and mechanical engineering. We have built an organization of professional staff with skills in all of these areas. The integration of these technical competencies enables us to design and manufacture performance analysis systems which are highly scalable to meet the needs of our customers.

Complex Logic Design. Our systems use field programmable gate arrays that are programmed by the host computer and therefore can be reconfigured for different applications. Our newest products have clock frequencies, which are the timing signals that synchronize all components within our system, of up to 344 megahertz, and logic densities, which are the number of individual switching components, or gates, of more than four million gates per chip. Our customers can download new features and enhancements from our website using a web browser that runs on our system, thereby allowing rapid updates of the system. Almost all of our logic is designed in the VHDL hardware description language, which is a unique programming language tailored to the development of logic chips. This language enables the easy migration of the hardware design to application specific integrated circuits as volumes warrant. We develop VHDL code in a modular fashion for reuse in logic design, which comprises a critical portion of our intellectual property. This reusable technology allows us to reduce the time-to-market for our new and enhanced products.

Software Technology. We devote substantial engineering resources to the development of software technology for use in our product lines. We have developed software to control our systems, analyze data collected by our systems, and monitor, maintain and self-test our hardware and field programmable gate array subsystems. A majority of our software technology and expertise is focused on the use of object-oriented development techniques to design software subsystems that can be reused across multiple product lines. These objects are client and server independent allowing for distributed network applications. This software architecture allows all of the software tools developed for our existing products to be utilized in all of our new products with very little modification. Another important component of our software technology is our graphical user interface design. Customer experience with our test products has enabled us to design a simple yet effective method to display complex configurations in clear and concise graphical user interfaces for intuitive use by engineers.

Customers

During the period from our incorporation in May 1997 through December 31, 2004, we have shipped our systems to over 1,000 customers, including 535 existing and new customers in 2004. No customer other than Cisco Systems accounted for more than 10% of our net revenues in 2004, 2003 or 2002. Our five largest customers collectively accounted for 44.4% of our net revenues in 2004, 40.4% of our net revenues in 2003 and 48.5% of our net revenues in 2002.

We generally do not have long-term contracts with our customers, and they may reduce or discontinue their purchases at any time.

Customers who purchased more than \$500,000 of our products during the year ended December 31, 2004 included:

Agere Systems	Hewlett Packard	Nortel
Alcatel	Hitachi	NTT
Allied Telesyn	Huawei	Riverstone Networks, Inc.
AT&T	Intel Corporation	Samsung
Bell Canada	Juniper Networks	Siemens
Broadcom Corporation	Lockheed Martin	Tellabs
Cisco Systems	MCI	Telus Communications
Comcast Cable	MIT Lincoln Laboratory	U.S. Government
Extreme Networks	Motorola	UTStarcom
Foundry Networks	Nokia	Verizon
Fujitsu		

Competition

The market for network performance measurement and analysis systems for use in the high-speed data communications industry is highly competitive, and we expect this competition to increase in the future. We currently compete with test equipment manufacturers such as Agilent Technologies, Spirent Communications and Anritsu. We also compete with a number of small companies which are focused on network performance measurement.

We believe that the principal competitive factors in our market include:

- timeliness of new product introductions;
- product quality, reliability and performance;
- ease of installation, integration and use;
- breadth of product offerings and features;
- price and overall cost of product ownership;
- customer service and technical support; and
- company reputation and size.

We believe that we compete favorably in the key competitive factors that impact our markets. We intend to remain competitive through ongoing research and development efforts to enhance existing systems and to develop new systems. We will also seek to expand our market presence through marketing and sales efforts. However, our market is still evolving and we may not be able to compete successfully against current or future competitors.

We expect competition to increase significantly from existing providers of network performance measurement and analysis products and from companies that may enter our existing or future markets. These companies may develop similar or substitute solutions that may be more cost-effective or provide better performance or functionality than our systems. Also, as we broaden our product offerings, we may move into new

markets in which we will have to compete against companies already established in those markets. Some of our existing and potential competitors have longer operating histories, significantly greater financial, marketing, service, support, technical and other resources, significantly greater name recognition and a larger installed base of customers than we do. In addition, many of our competitors have well established relationships with our current and potential customers and have extensive knowledge of our industry. It is possible that new competitors or alliances among competitors will emerge and rapidly acquire market share. Moreover, our competitors may consolidate with each other, or with other companies, giving them even greater capabilities with which to compete against us.

To be successful, we must continue to respond promptly and effectively to the challenges of changing customer requirements, technological advances and competitors' innovations. Accordingly, we cannot predict what our relative competitive position will be as the market evolves for network performance measurement and analysis systems.

Sales, Marketing and Technical Support

Sales. Our direct sales force and manufacturers' representatives market and sell our systems primarily in the United States and Japan. Our distributors market and sell our systems primarily outside of the United States and Japan. Our net revenues from international product shipments were \$30.8 million in 2004, \$25.3 million in 2003, and \$14.3 million in 2002. Our direct sales force maintains close contact with our customers and provides technical support to our manufacturers' representatives and distributors.

Marketing. We have a number of marketing programs to support the sale and distribution of our systems and to inform existing and potential customers and our manufacturers' representatives and distributors about the capabilities and benefits of our systems. Our marketing efforts also include promoting our business in the following ways:

- sponsoring technical seminars that highlight our solutions;
- participating in industry trade shows and technical conferences;
- communicating through our corporate website; and
- advertising in trade journals.

Technical Support. We maintain a technically knowledgeable and responsive customer service and support staff that is critical to our development of long-term customer relationships. This highly qualified and specialized internal customer engineering group:

- offers our customers solutions for their performance validation needs;
- develops custom applications at our company headquarters;
- can be deployed to customer sites on short notice; and
- provides our customers with the training to optimally utilize our systems.

Manufacturing

Our manufacturing operations consist primarily of materials planning and procurement, quality control, logistics, final assembly and testing and distribution. We outsource the manufacture and assembly of printed circuit board assemblies to third party contract manufacturers and assembly companies. This manufacturing process enables us to operate without substantial space and personnel dedicated to manufacturing operations. As a result, we can conserve a significant portion of the working capital and capital expenditures that may be required for other operating needs.

We are dependent upon sole or limited source suppliers for key components and parts used in our systems, including field programmable gate arrays, chips, oscillators and optical modules. We and our contract manufacturers purchase components through purchase orders and have no guaranteed or long-term supply arrangements with our respective suppliers. In addition, the availability of many components is dependent in part on our ability and the ability of our contract manufacturers and assembly companies to provide suppliers with accurate forecasts of future

requirements. Any extended interruption in the supply of any of the key components currently obtained from a sole or limited source or delay in transitioning to a replacement supplier's product or replacement component into our systems could disrupt our operations and significantly harm our business in any given period.

Lead times for materials and components ordered by us and by our contract manufacturers vary and depend on factors such as the specific supplier, contract terms and demand for a component at a given time. We and our contract manufacturers acquire materials, complete standard subassemblies and assemble fully-configured systems based on sales forecasts and historical purchasing patterns. If orders do not match forecasts or substantially deviate from historical patterns, we and our contract manufacturers may have excess or inadequate inventory of materials and components.

Research and Development

We believe that research and development is critical to our business. Our development efforts include anticipating and addressing the performance analysis needs of network equipment manufacturers, Internet and network service providers, communications chip manufacturers and network users and focusing on emerging high growth network technologies.

Our future success depends on our ability to continue to enhance our existing products and to develop products that address the needs of our customers. We closely monitor changing customer needs by communicating and working directly with our customers and distributors. We also receive input from active participation in industry groups responsible for establishing technical standards.

Development schedules for technology products are inherently difficult to predict, and we cannot be certain that we will introduce any proposed new products in a timely fashion. Also, we cannot be certain that our product development efforts will result in commercially successful products or that our products will not contain software errors or other performance problems or be rendered obsolete by changing technology or new product announcements by other companies.

We plan to continue to make significant investments in research and development. Our research and development expenses were \$25.0 million in 2004, \$22.0 million in 2003 and \$20.4 million in 2002. These costs included stock-based compensation expense of \$271,000 in 2004, \$1.3 million in 2003 and \$2.9 million in 2002.

Intellectual Property and Proprietary Rights

Our success and ability to compete is dependent in part upon our ability to protect and maintain our proprietary rights to our intellectual property. We currently rely on a combination of patent, trademark, trade secret and copyright laws and restrictions on disclosure to establish and protect our intellectual property. We have one U.S. patent and have filed applications for a number of other patents in the U.S., Japan and the European Union. We cannot be certain that those applications will result in the issuance of any patents, or that any such patents, if they are issued, or our existing patent will be upheld. We also cannot be certain that such patents, if issued, and our existing patent will be effective in protecting our proprietary technology. We have registered our Ixia name, the Ixia logo and certain other trademarks in the United States and in the European Union, and have filed for registration of additional trademarks.

We generally enter into confidentiality agreements with our officers, employees and consultants. We also generally limit access to and distribution of our source code and further limit the disclosure and use of other proprietary information. However, these measures provide only limited protection of our intellectual property rights. In addition, we may not have signed agreements containing adequate protective provisions in every case, and the contractual provisions that are in place may not provide us with adequate protection in all circumstances. Further, we have not included copyright notices on all of our copyrightable intellectual property.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain or use technology that we regard as proprietary. We cannot be certain that the steps taken by us to protect our proprietary rights will be adequate to prevent misappropriation of our technology or that our competitors will not independently develop technologies that are similar or superior to our technology. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States. Any infringement of our proprietary rights could result in significant litigation costs, and any failure to adequately protect our proprietary rights could result in our competitors offering similar products, potentially resulting in loss of competitive advantage and decreased revenues. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could result in substantial costs and diversion of resources and could significantly harm our business.

The telecommunication and data communications industries are characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. From time to time, third parties may assert patent, copyright, trademark and other intellectual property rights to technologies that are important to our business. We have not conducted a search to determine whether the technology we have in our products infringes or misappropriates intellectual property held by third parties. In addition, because patent applications in the United States are not publicly disclosed until the patent is issued, applications may have been filed which could relate to our products. Any claims asserting that our systems infringe or may infringe proprietary rights of third parties, if determined adversely to us, could significantly harm our business.

Employees

As of December 31, 2004, we had 403 full-time employees. We also from time to time hire temporary and part-time employees and independent contractors. Our future performance depends, to a significant degree, on our continued ability to attract and retain highly skilled and qualified technical, sales and marketing and senior management personnel. Our employees are not represented by any labor unions. We consider our relations with our employees to be good.

Available Information

Our website address is www.ixiacom.com. We make available free of charge through a link provided at such website our Forms 10-K, 10-Q and 8-K as well as any amendments thereto. Such reports are available as soon as reasonably practicable after they are filed with the Securities and Exchange Commission.

Business Risk Factors

The statements that are not historical facts contained in the above "Business" discussion in this Item 1 are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and reflect the current belief, expectations or intent of the Company's management. These statements are subject to and involve certain risks and uncertainties. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Factors" in Item 7 of this Annual Report on Form 10-K.

Item 2. Properties

Our corporate headquarters are located in Calabasas, California, where we currently lease approximately 71,600 square feet of space which houses our research and development, sales and marketing, finance and administration and manufacturing operations. The lease expires in May 2008, if not renewed. We also lease office space for our sales offices in Santa Clara, California, North Carolina, the United Kingdom, Japan and China. Additionally, we have a facility in Bucharest, Romania used primarily for research and development activities. We believe that our current facilities will be adequate to meet our needs for at least the next 12 months, and that we will be able to obtain additional space when and as needed on acceptable terms.

Item 3. Legal Proceedings

From time to time, certain legal actions may arise in the ordinary course of the Company's business. To date, such legal actions have not had a material adverse effect on the Company's consolidated financial position, results of operations or cash flows.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of the Company's security holders during the fourth quarter of 2004.

PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Registered Securities

(a) Market Price, Dividends and Related Matters

Ixia's common stock is traded on the Nasdaq National Market under the symbol "XXIA." The following table sets forth the high and low closing sales prices of our common stock as reported on the Nasdaq National Market for the following time periods.

	High	Low
2003		
First quarter	\$ 5.80	\$ 3.85
Second quarter	6.86	4.95
Third quarter	11.50	6.92
Fourth quarter	13.40	10.15
2004		
First quarter	\$ 15.59	\$ 9.63
Second quarter	12.21	8.67
Third quarter	9.72	5.76
Fourth quarter	16.90	8.88

On March 1, 2005 the closing sales price reported for our common stock was \$18.55 per share, and as of that date there were approximately 44 shareholders of record.

We have never declared or paid cash dividends on our common stock and do not anticipate paying any dividends in the foreseeable future.

(b) Use of Proceeds

None.

(c) Issuer Repurchases of Equity Securities

No securities were repurchased by the Company during any month during the fourth quarter of 2004.

Item 6. Selected Financial Data

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the notes to those consolidated financial statements. The consolidated statement of income data set forth below for the years ended December 31, 2004, 2003 and 2002 and the consolidated balance sheet data as of December 31, 2004 and 2003 are derived from, and are qualified in their entirety by reference to, the Company's audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The consolidated statement of income data for the years ended December 31, 2001 and 2000 and the consolidated balance sheet data as of December 31, 2002, 2001 and 2000 are derived from audited financial statements not included herein, but which were previously filed with the SEC.

	Year Ended December 31,				
	2004	2003	2002	2001	2000
Consolidated Statements of Income Data					
<i>(in thousands, except per share data):</i>					
Net revenues	\$ 116,978	\$ 83,533	\$ 67,594	\$ 77,157	\$ 76,044
Cost of revenues ⁽¹⁾	20,716	15,761	13,310	16,610	14,825
Amortization of purchased technology	3,044	1,183	-	-	-
Gross profit	93,218	66,589	54,284	60,547	61,219
Operating expenses: ⁽¹⁾					
Research and development	24,960	21,980	20,386	19,355	14,421
Sales and marketing	31,865	25,050	20,817	19,557	17,411
General and administrative	12,479	9,179	7,852	8,643	8,709
Amortization of intangible assets	1,532	1,070	941	57	-
Impairment of goodwill and other intangible assets	-	410	1,677	-	-
Total operating expenses	70,836	57,689	51,673	47,612	40,541
Income from operations	22,382	8,900	2,611	12,935	20,678
Interest and other income, net	2,960	3,062	2,743	4,035	1,552
Income before income taxes	25,342	11,962	5,354	16,970	22,230
Income tax expense	6,463	3,258	1,944	7,221	14,245
Net income	\$ 18,879	\$ 8,704	\$ 3,410	\$ 9,749	\$ 7,985

Earnings per share:

Basic	\$ 0.31	\$ 0.15	\$ 0.06	\$ 0.18	\$ 0.17
Diluted	\$ 0.29	\$ 0.14	\$ 0.06	\$ 0.16	\$ 0.15

Weighted average number of common and common equivalent shares outstanding:

Basic	60,687	58,344	56,902	54,550	47,244
Diluted	64,745	62,227	60,609	61,977	53,777

⁽¹⁾Stock-based compensation included in:

Cost of revenues	\$ 30	\$ 157	\$ 398	\$ 729	\$ 948
Research and development	271	1,316	2,864	6,055	7,182
Sales and marketing	80	166	1,385	3,245	4,695
General and administrative	38	280	658	2,159	3,807
	\$ 419	\$ 1,919	\$ 5,305	\$ 12,188	\$ 16,632

Consolidated Balance Sheet Data*(in thousands):*

	December 31,				
	2004	2003	2002	2001	2000
Cash and cash equivalents	\$ 16,383	\$ 21,133	\$ 45,265	\$ 108,168	\$ 78,066
Short-term investments in marketable securities	81,757	42,718	25,650	8,475	18,000
Working capital	109,236	77,531	83,125	128,206	104,025
Investments in marketable securities	49,015	58,072	51,306	-	-
Total assets	236,309	185,018	157,661	144,166	121,682
Total shareholders' equity	206,926	167,054	149,167	137,821	108,051

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of many factors. The consolidated results of operations for the years ended December 31, 2004, 2003 and 2002 are not necessarily indicative of the results that may be expected for any future period. The following discussion should be read in conjunction with the consolidated financial statements and the notes thereto included in Item 8 of this Annual Report on Form 10-K and in conjunction with the "Risk Factors" described below.

Overview

We are a provider of technology and systems that allow our customers to test and measure the performance, functionality, and conformance of Internet Protocol (IP) equipment and networks, and the applications that run over them. Our solutions generate, capture, characterize, and analyze high volumes of realistic network and application traffic, exposing problems, assessing performance, and verifying conformance to industry specifications. We offer a single hardware platform with interchangeable interfaces, utilizing a single set of applications and Application Programming Interfaces (APIs) which allows our customers to create a fully integrated, easy-to-use test bed. The networks our systems analyze include Ethernet networks operating at speeds of up to 10 gigabits per second, which carry data traffic over optical fiber or electrical cable. Other networks include Packet over SONET networks operating at speeds of up to 10 gigabits per second which transmit information over high-speed optical links and Asynchronous Transfer Mode (ATM) networks, operating at speeds of up to 622 megabits per second. Our telephony test suite is used to test and verify traditional Time-Division Multiplexing (TDM) voice based networks and Voice over IP technology, devices, and systems. Our customers also use Ixia's performance applications to test and verify web, Internet, security, and business applications.

The following table sets forth, for the periods indicated, our net revenues by principal product category in dollars and as a percentage of total net revenues:

Product Category	Year Ended December 31,					
	2004		2003		2002	
	(in thousands, except percentages)					
Ethernet	\$ 76,728	65.6%	\$ 54,758	65.6%	\$ 43,259	64.0%
SONET	8,099	6.9	7,832	9.4	11,138	16.5
Software	18,100	15.5	10,548	12.6	4,496	6.6
Chassis and other	14,051	12.0	10,395	12.4	8,701	12.9
Total	\$ 116,978	100.0%	\$ 83,533	100.0%	\$ 67,594	100.0%

Over the last three years, revenues from Ethernet interface cards has increased while revenues from SONET interface cards declined in 2003 from the prior year and increased only slightly in 2004 over 2003. Generally, Ethernet interface cards are used to test equipment that is used at the edge of the Internet and in enterprise applications, where demand has been increasing over the last two years. SONET interface cards are used to test equipment that is used in core of the Internet and in telecommunications applications, where demand has weakened over the past two years. Looking forward, we expect demand for our Ethernet interface cards to remain strong and we expect demand for our SONET interface cards to remain soft. Over the same time period, software revenues have increased both in dollar terms and as a percentage of revenue. This increase in software revenues is the result of our strategy to use specialized software applications to drive demand for our proprietary hardware platform. We expect software revenues to continue to increase both in dollar terms and as a percentage of net revenues.

Sales to our five largest customers collectively accounted for approximately \$52.0 million, or 44.4%, of our net revenues in 2004, \$33.7 million, or 40.4%, in 2003 and \$32.8 million, or 48.5%, in 2002. To date, we have sold our systems primarily to network equipment manufacturers. While we expect that we will continue to have some customer concentration for the foreseeable future, we have sold our systems to a wide variety of customers. During 2004, we shipped our systems to 535 customers, including over 245 new customers in 2004. To the extent we develop a broader and more diverse customer base, we anticipate that our reliance on any one customer will decline.

Net Revenues. Our revenues consist primarily of hardware and software product sales. In some instances our software products are installed and run on other companies' hardware. At other times, software products are installed on our hardware products and are an integral part of the functionality of the hardware. Our products are fully functional at the time of shipment and do not require significant production, modification or customization.

Accordingly, revenues from product sales is recognized upon shipment provided that (1) a purchase order has been received or a contract has been executed; (2) title has transferred; (3) the fee is fixed and determinable; and (4) collectibility is deemed probable. When a sale involves multiple elements (typically sales of products that include warranty support and services), the entire fee from the arrangement is allocated to each respective element based on vendor-specific objective evidence ("VSOE") of fair value. We determine VSOE based on sales prices charged to customers when the same element is sold separately or based upon renewal pricing. Revenue is recognized on multiple element arrangements as each element is delivered, provided the other revenue recognition criteria noted above have also been met. Warranty support and service revenue is deferred and recognized ratably over the period during which the services are to be performed.

We use distributors to market and sell our systems primarily outside the United States and Japan. Due to the broad range of features and options available with our hardware and software products, distributors generally do not stock our products and typically place orders with us after receiving an order from an end customer. These distributors receive business terms of sale similar to those received by our other customers.

Cost of Revenues. Our cost of revenues consists of materials, payments to third party manufacturers, salaries and related expenses for manufacturing personnel and the warranty cost of hardware to be replaced during the warranty period, typically one-year. We outsource the majority of our manufacturing operations, and we conduct final assembly, supply chain management, quality assurance, documentation control and shipping at our facility. Accordingly, a significant portion of our cost of revenues consists of payments to our contract manufacturers. Cost of revenues also includes royalties and amortization of purchased technology in connection with the rights acquired from NetIQ Corporation ("NetIQ") in July 2003 related to our IxChariot products and the amortization of purchased technology from the February 2004 acquisition of G3 Nova Technology, Inc. ("G3 Nova") related to our IxVoice products (for additional information, see Note 4 to the Consolidated Financial Statements). In addition, cost of revenues includes a non-cash component related to the amortization of deferred stock-based compensation allocated to manufacturing personnel.

Gross Margins. Gross margins of our various interface cards and software products have generally been consistent and have exceeded the gross margins of our chassis. In general, our gross margins are primarily affected by the following factors:

- the pricing we are able to obtain from our component suppliers and contract manufacturers;
- the mix of our products sold, including the mix of software versus hardware sales;
- new product introductions by us and by our competitors;
- changes in our pricing policies and those of our competitors;
- demand for our products;
- expenses related to acquired technologies, such as royalties and amortization of intangible assets;
- production volume; and
- the mix of sales channels through which our products are sold.

In the near term, we anticipate gross margins as a percentage of net revenues to remain consistent.

Operating Expenses. We generally recognize our operating expenses as we incur them in three major operational categories: research and development, sales and marketing, general and administrative and amortization of certain purchased intangible assets.

Research and development expenses consist primarily of salaries and related personnel and consulting costs related to the design, development, testing and enhancements of our systems. We expense our research and development costs as they are incurred. We also capitalize and depreciate over a five-year period costs of our systems used for internal purposes. We expect research and development expenses to increase in dollar terms as we seek to attain our strategic product development objectives and to meet changing customer requirements and technological advances, and due to an increase in the amortization of deferred stock-based compensation related to individuals engaged in research and development activities as a result of the 2005 adoption of the recently issued SFAS 123R (see additional information in the Recent Accounting Pronouncements section below).

Sales and marketing expenses consist primarily of salaries, commissions and related expenses for personnel engaged in sales and marketing and customer support functions, as well as costs associated with promotional and other marketing activities. We expect sales and marketing expenses to increase in dollar terms in the near term related to anticipated increases in headcount, higher sales volumes and due to an increase in the amortization of deferred stock-based compensation related to individuals engaged in sales and marketing activities as a result of the 2005 adoption of the recently issued SFAS 123R.

General and administrative expenses consist primarily of salaries and related expenses for executive, finance, human resources, information technology and administrative personnel, as well as recruiting and professional fees, insurance costs and other general corporate expenses, including rent. We expect sequential increases in dollar terms in general and administrative expenses as we continue to build out our administrative infrastructure to support our anticipated growth and due to an increase in the amortization of deferred stock-based compensation related to general and administrative individuals as a result of the 2005 adoption of the recently issued SFAS 123R.

Amortization of intangible assets consists of the amortization of the purchase price of various intangible assets over their expected useful lives.

Periodically we review goodwill and other intangible assets for impairment. An impairment charge is recorded to the extent that the carrying value exceeds the fair value in the period that the impairment circumstances occurred.

Deferred stock-based compensation, recorded in the shareholders' equity section of the consolidated balance sheet, represents the difference between the deemed fair value of our common stock for accounting purposes and (1) the exercise price of the options or warrants at the date of grant or (2) the purchase price of the restricted stock. Deferred stock-based compensation is presented as a reduction of shareholders' equity, with amortization recorded over the vesting period which is typically four years. We intend to adopt the recently issued SFAS 123R in our third quarter beginning July 1, 2005. Under SFAS 123R, deferred stock-based compensation will be determined based on the appropriate fair value model and will result in an increase in deferred stock-based compensation and associated amortization as discussed above. We are evaluating the requirements of SFAS 123R and expect that the adoption of SFAS 123R will have a material adverse impact on our consolidated results of operations and earnings per share.

Interest and other income, net represents interest on cash and a variety of securities, including commercial paper, money market funds and government, federal agency and corporate debt securities, and certain foreign currency gains and losses.

Income tax expense is determined based on the amount of earnings and enacted federal, state and foreign tax rates, adjusted for allowable credits and the effects of equity compensation plans.

Critical Accounting Policies and Estimates

Management's discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, allowance for doubtful accounts, write-downs for obsolete inventory, deferred taxes, impairment of long-lived assets and contingencies and litigation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

We apply the following critical accounting policies in the preparation of our consolidated financial statements:

- *Revenue Recognition Policy.* We recognize revenue as discussed in "Net Revenues" in the "Overview" section of Item 7.
- *Allowance for Doubtful Accounts.* Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is based on our best estimate of the amount of probable credit losses in existing accounts receivable. The allowance for doubtful accounts is determined based on historical write-off experience, current customer information and other relevant data. We review the allowance for doubtful accounts monthly. Past due balances of 60 days and over are reviewed individually for collectibility. Account balances are charged off against the allowance when we believe it is probable the receivable will not be recovered. We do not have any off-balance-sheet credit exposure related to our customers.

- *Write-Down of Obsolete Inventory.* We write-down inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. If actual future demand is less favorable than as projected by management, additional inventory write-downs may be required.
- *Deferred Taxes.* Deferred taxes are determined based on the differences between the financial statement and tax bases of assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized. In assessing the need for a valuation allowance we consider estimates of future taxable income and ongoing prudent and feasible tax planning strategies.
- *Acquisition Purchase Price Allocation.* When we acquire a business, product line or rights to a product or technology, we allocate the purchase price, including related transaction fees, to the various tangible and intangible assets acquired and the liabilities assumed, based on their estimated fair values. Determining the fair value of certain assets and liabilities acquired is subjective in nature and often involves the use of significant estimates and assumptions. To assist in this process, we may obtain appraisals from valuation specialists for certain intangible assets. Most of the assumptions used to determine fair value are made based on forecasted information. The useful lives of amortizable intangible assets are reviewed for reasonableness periodically by management in light of current conditions.
- *Impairment of Long-Lived Assets.* We evaluate the recoverability of our identifiable definite life intangible assets and other long-lived assets in accordance with Statement of Financial Accounting Standards ("SFAS") 144 which generally requires that we assess these assets for recoverability when events or circumstances indicate a potential impairment by estimating the undiscounted cash flows to be generated from the use and ultimate disposition of these assets. To the extent that the estimated undiscounted cash flows fall below the carrying value of the intangible or other long lived assets we write-down the assets to fair value. Fair value is generally determined based on discounted cash flows. We evaluate the recoverability of our goodwill in accordance with SFAS 142 which requires us to assess our goodwill annually for impairment. Impairment losses are recorded to the extent that the carrying value of the goodwill exceeds the fair value.
- *Contingencies and Litigation.* We evaluate contingent liabilities, including threatened or pending litigation, in accordance with SFAS 5, "Accounting for Contingencies," and we record accruals when the loss is deemed probable and the liability can reasonably be estimated. We make these assessments based on the facts and circumstances of each situation and in some instances based in part on the advice of outside legal counsel.

Results of Operations

The following table sets forth certain statement of income data as a percentage of net revenues for the periods indicated:

	Year Ended December 31,		
	2004	2003	2002
Statement of Income Data:			
Net revenues	100.0%	100.0%	100.0%
Cost of revenues ⁽¹⁾	17.7	18.9	19.7
Amortization of purchased technology	2.6	1.4	0.0
Gross profit	79.7	79.7	80.3
Operating expenses⁽¹⁾			
Research and development	21.3	26.3	30.2
Sales and marketing	27.3	30.0	30.8
General and administrative	10.7	11.0	11.6
Amortization of intangible assets	1.3	1.3	1.4
Impairment of goodwill and other intangible assets	0.0	0.5	2.5
Total operating expenses	60.6	69.1	76.5
Income from operations	19.1	10.6	3.8
Interest and other income, net	2.5	3.7	4.1
Income before income taxes	21.6	14.3	7.9
Income tax expense	5.5	3.9	2.9
Net income	16.1%	10.4%	5.0%
⁽¹⁾ Stock-based compensation included in:			
Cost of revenues	0.0%	0.2%	0.6%
Research and development	0.3	1.6	4.2
Sales and marketing	0.1	0.2	2.0
General and administrative	0.0	0.3	1.0
	0.4%	2.3%	7.8%

Comparison of the Years Ended December 31, 2004 and 2003

Net Revenues. In 2004, net revenues increased 40.0% to \$117.0 million from the \$83.5 million recorded in 2003. This growth in net revenues in 2004 was largely a result of the \$22.0 million increase in sales of our Ethernet products, especially our 10 Gigabit and Gigabit TXS Ethernet Load Modules, and the \$7.6 million increase in sales of certain of our Software products, including IxChariot, IxVoice and Protocol software. In addition, this growth was from a combination of existing and new customers across all regions, but especially in North America where net revenues grew by \$28.0 million in 2004 compared to 2003. Sales to our five largest customers collectively accounted for approximately \$52.0 million or 44.4% of our net revenues in 2004 compared to \$33.7 million or 40.4% of net revenues in 2003.

Gross Profit. Gross profit increased 40.0% to \$93.2 million in 2004 from \$66.6 million in 2003. Our gross profit remained constant at 79.7% of net revenues in 2004 and 2003. Amortization of purchased technology increased to \$3.0 million in 2004 from \$1.2 million in 2003. The increase was a result of amortization of intangible assets associated with the acquisition of G3 Nova in February 2004 and a full year of amortization of purchased technology associated with certain rights acquired from NetIQ in July 2003. Royalty expense related to the NetIQ transaction was \$2.0 million in 2004 and \$1.6 million in 2003. The NetIQ royalty period ended on December 31, 2004. The increases in amortization of purchased technology and the NetIQ royalty were offset by the increase in sales of higher margin software products during 2004 as compared to 2003.

Research and Development Expenses. Research and development expenses increased to \$25.0 million in 2004 from \$22.0 million in 2003. This increase was primarily due to higher compensation and related benefit costs of \$3.6 million due to the addition of engineering personnel and the February 2004 acquisition of G3 Nova which employed an established R&D development group in Romania. Travel expenses increased by \$375,000 in 2004 compared to 2003 due to our R&D development efforts in both Romania and India. These increases were partially offset by a \$1.0 million reduction in the amortization of deferred stock-based compensation related to individuals engaged in research and development activities.

Sales and Marketing Expenses. Sales and marketing expenses increased to \$31.9 million in 2004 from \$25.1 million in 2003. This increase was primarily due to the addition of direct sales and marketing personnel, and their associated commissions and benefits, which resulted in an increase of \$5.2 million in sales and marketing expenses in 2004 compared to 2003. The additional headcount also resulted in increased travel expenses in 2004 of \$442,000.

General and Administrative Expenses. General and administrative expenses increased to \$12.5 million in 2004 from \$9.2 million in 2003. This increase was primarily due to the build-out of our administrative infrastructure to support our growth, accounting fees incurred to comply with the Sarbanes-Oxley Act of 2002 and legal expenses primarily related to ongoing litigation. The addition of general and administrative employees in 2004 resulted in increased salary and benefit costs of \$1.1 million. Accounting fees increased by approximately \$528,000 and legal costs increased by approximately \$813,000 in 2004 compared to 2003.

Amortization of Intangible Assets. Amortization of intangible assets increased to \$1.5 million in 2004 from \$1.1 million in 2003. This increase was primarily due to the amortization of intangible assets related to the acquisition of G3 Nova in February 2004 and a full year of amortization of certain rights acquired from NetIQ in July 2003.

Impairment of Goodwill and Other Intangible Assets. Due to the decline in business conditions in 2002, we restructured our business and realigned resources to focus on profit contribution, high-growth markets and core opportunities. In 2002, we recorded a charge of \$1.7 million related to the impairment of goodwill and purchased intangible assets associated with the October 2001 acquisition of Cairnis, Inc. In 2003, we recorded a further impairment charge of \$410,000 for the remaining Cairnis, Inc. intangible assets based on revised estimates of the present value of future cash flows because of a decline in potential customer interest for the Cairnis product.

Interest and Other Income, Net. Interest and other income, net remained relatively constant from year to year decreasing slightly to \$3.0 million in 2004 from \$3.1 million in 2003. We incurred minimal interest expense in 2004 and 2003.

Income Tax Expense. Income tax expense increased to \$6.5 million in 2004 from \$3.3 million in 2003. Income tax expense resulted in an annual effective tax rate of 25.5% in 2004 and 27.2% in 2003. The annual effective tax rate in 2004 and 2003 differs from the statutory rate primarily due to research and development tax credits and the tax benefits from the disqualifying disposition of incentive stock options to the extent that stock-based compensation expense had previously been reflected in our financial statements, partially offset by nondeductible stock-based compensation charges.

Comparison of the Years Ended December 31, 2003 and 2002

Net Revenues. In 2003, net revenues increased 23.6% to \$83.5 million from the \$67.6 million recorded in 2002. This increase in net revenues in 2003 was largely a result of increased sales of our Ethernet products, especially our 10/100 Mbps and Gigabit Ethernet Load Modules, and growth in sales of our software products. In addition, this growth was from a combination of both existing and new customers. Sales to our five largest customers collectively accounted for approximately \$33.7 million or 40.4% of our net revenues in 2003 compared to \$32.8 million or 48.5% of net revenues in 2002.

Gross Profit. Gross profit increased 22.7% to \$66.6 million in 2003 from \$54.3 million in 2002. Our gross profit margin decreased to 79.7% in 2003 from 80.3% in 2002. This decrease in the gross profit margin was primarily a result of royalties and amortization of purchased technology associated with certain rights acquired from NetIQ Corporation in July 2003. The acquisition agreement required minimum royalties of at least \$500,000 for each quarter through December 31, 2004. This decrease was partially offset by an increase in sales of high margin software products and decreasing component costs during 2003 as compared to 2002.

Research and Development Expenses. Research and development expenses increased to \$22.0 million in 2003 from \$20.4 million in 2002. This increase was primarily due to higher compensation and related benefit costs of \$1.9 million due to the addition of engineering personnel through internal hiring and acquisitions and to higher consulting costs of \$460,000 associated with the increased use of third party consultants. This increase

was partially offset by a \$1.5 million reduction in the amortization of deferred stock-based compensation related to individuals engaged in research and development activities and decreased prototype costs as a result of the timing of the development cycle of our hardware products.

Sales and Marketing Expenses. Sales and marketing expenses increased to \$25.1 million in 2003 from \$20.8 million in 2002. This increase was primarily due to increases in the number of direct and indirect sales and marketing personnel resulting in higher salaries, commissions and benefits of \$4.6 million. This increase was partially offset by a \$1.2 million reduction in the amortization of deferred stock-based compensation related to individuals engaged in sales and marketing activities.

General and Administrative Expenses. General and administrative expenses increased to \$9.2 million in 2003 from \$7.9 million in 2002. This increase was primarily due to increases in employee compensation and benefits of nearly \$1.0 million, higher outside recruiting expenses of \$296,000 related to increased headcount, an increase in insurance amounting to \$281,000 and higher accounting expenses of \$240,000 primarily due to an increase in tax services. This increase was partially offset by a \$378,000 reduction in the amortization of deferred stock-based compensation related to individuals engaged in general and administrative activities.

Amortization of Intangible Assets. Amortization of intangible assets increased to \$1.1 million in 2003 from \$941,000 in 2002. This increase was primarily due to amortization of certain rights acquired from NetIQ in July 2003 related to our IxChariot products and a full year of amortization of intangible assets related to the IxANVL product line we acquired in February 2002. These increases were partially offset by a reduction in the amortization of the Coimis intangible assets acquired in October 2001.

Impairment of Goodwill and Other Intangible Assets. Due to the decline in business conditions in 2002, we restructured our business and realigned resources to focus on profit contribution, high-growth markets and core opportunities. As a result, in 2002, we recorded an impairment charge of \$1.7 million related to the impairment of goodwill and purchased intangible assets related to the October 2001 acquisition of Coimis, Inc. The impairment was measured as the amount by which the carrying amount exceeded the present value of the estimated future cash flows for goodwill and purchased intangible assets. In 2003, we recorded a further impairment charge of \$410,000 for the remaining Coimis, Inc. intangible assets based on revised estimates of the present value of future cash flows because of a decline in potential customer interest for the Coimis product.

Interest and Other Income, Net. Interest and other income, net increased to \$3.1 million in 2003 from \$2.7 million in 2002. This increase was primarily the result of an increase in the amount of investments in marketable securities in 2003 as compared to 2002. This increase was partially offset as a result of a decline in interest rates. We incurred minimal interest expense in 2003 and 2002.

Income Tax Expense. Income tax expense increased to \$3.3 million in 2003 from \$1.9 million in 2002. Income tax expense resulted in an annual effective tax rate of 27.2% in 2003 and 36.3% in 2002. The annual effective tax rate in 2003 and 2002 differs from the statutory rate primarily due to research and development tax credits and the tax benefit from the disqualifying disposition of incentive stock options to the extent that stock-based compensation expense had previously been reflected in the our financial statements, partially offset by nondeductible stock-based compensation charges.

Liquidity and Capital Resources

As of December 31, 2004, we had cash and cash equivalents of \$16.4 million compared to \$21.1 million as of December 31, 2003. Our cash, cash equivalents and short and long term investments, when viewed as a whole, totaled \$147.2 million as of December 31, 2004 compared to \$121.9 million as of December 31, 2003.

Net cash provided by operating activities was \$29.4 million in 2004, \$17.7 million in 2003 and \$14.2 million in 2002. Net cash generated from operations in 2004, 2003 and 2002 was primarily provided by net income adjusted for significant non-cash expenses and changes in working capital. The most significant changes in working capital in 2004 were due to the \$5.1 million increase in accounts receivable as a result of higher sales in 2004 compared to 2003 and \$5.8 million provided by the timing of tax payments. Changes to working capital in 2003 were primarily due to an \$8.0 million increase in accounts receivable as a result of higher sales and the timing of shipments in the fourth quarter of 2003, and a \$4.8 million increase in accrued expenses due primarily to the accrual of the 2003 bonus with no bonus payout during the period and a royalty accrual related to the July 2003 NetIQ transaction. The most significant changes to working capital in 2002 were due to the timing of income tax payments and refunds.

Cash used in investing activities was \$46.5 million in 2004, \$46.7 million in 2003 and \$78.6 million in 2002. Cash used in investing activities in 2004 principally consisted of \$30.0 million of net purchases of marketable securities, \$8.7 million related to the purchase of property and equipment and \$6.4 million paid in connection with the February 2004 acquisition of G3 Nova. Cash used in investing activities in 2003 primarily

related to \$23.8 million of net purchases of marketable securities, \$18.1 million paid in connection with certain rights acquired from NetIQ in July 2003 and \$4.2 million related to the purchase of property and equipment. Cash used in investing activities in 2002 consisted of approximately \$68.5 million for the net purchase of marketable securities, \$5.2 million paid in connection with the February 2002 acquisition of the assets of the ANVL (Automated Network Validation Library) product line from Empirix, Inc. and \$4.7 million related to the purchase of property and equipment.

Financing activities provided net cash of \$12.3 million in 2004, \$4.8 million in 2003 and \$1.4 million in 2002. Financing activities in these periods consisted exclusively of proceeds from the exercise of stock options.

We believe that our existing balances of cash and cash equivalents and cash flow expected to be generated from our operations will be sufficient to meet our cash needs for at least the next 12 months, although we could be required, or could elect, to seek additional funding prior to that time, however, financing may not be available on favorable terms, if at all. Our capital requirements will depend on many factors, including the growth rate of our net revenues, our profitability, our capital expenditures, any acquisitions of key technologies, working capital requirements, the timing and extent of spending to support product development efforts and the expansion of our sales, marketing and technical support efforts.

Financial Commitments

Our financial commitments at December 31, 2004 are as follows (in thousands):

Contractual Obligations	Year Ending December 31,						
	Total	2005	2006	2007	2008	2009	Thereafter
Operating leases	\$ 8,901	\$ 2,555	\$ 2,534	\$ 2,421	\$ 998	\$ 196	\$ 197

As of December 31, 2004, we had accrued liabilities of \$2.5 million for the exercise of the NetIQ purchase option and \$1.9 million for the G3 Nova earnout. These amounts were paid in January 2005 (see Note 4 to the Consolidated Financial Statements for additional information).

Recent Accounting Pronouncements

In February 2004, the FASB issued FASB Staff Position ("FSP") FIN 46(R)-1 "Reporting Variable Interests in Specified Assets of Variable Interest Entities under Paragraph 13 of FASB Interpretation No. 46 (Revised December 2003) ("FIN 46(R))", Consolidation of Variable Interest Entities." The FSP states that a specified asset of a variable interest entity and the liability secured by the asset should not be deemed a separate variable interest entity. The adoption of FIN 46(R)-1 did not have a material impact on our consolidated financial position, results of operations or cash flows.

In March 2004, the EITF reached a consensus on Issue 03-1, "The Meaning of Other-Than-Temporary Impairment and its Application to Certain Investments." EITF No. 03-1 requires disclosures about investments accounted for under SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," in an unrealized loss position and are designed to help financial statement users analyze a company's unrealized losses and better understand the basis for any management conclusion that the impairment is temporary. All new disclosures are effective for the annual reporting period ended December 31, 2004 and did not have a material impact on our consolidated financial position, results of operations or cash flows.

In June 2004, the FASB issued Emerging Issues Task Force Issue No. 02-14 ("EITF 02-14"), "Whether an Investor Should Apply the Equity Method of Accounting to Investments Other Than Common Stock." EITF 02-14 states that an investor should only apply the equity method of accounting when it has investments in either common stock or in-substance common stock of a corporation, provided that the investor has the ability to exercise significant influence over the operating and financial policies of the investee. The adoption of EITF 02-14 did not have a material impact on our consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued FASB Staff Position No. 109-2 ("FAS 109-2"), "Accounting and Disclosure Guidance for the Foreign Earnings Repatriation Provision within the American Jobs Creations Act of 2004." The American Jobs Creations Act ("AJCA") provides an 85% dividends received deduction on the repatriation of certain foreign earnings to a U.S. taxpayer provided certain criteria are met. FAS 109-2 provides accounting and disclosure guidance for the repatriation provision. We do not expect the adoption of FAS 109-2 to have material impact on our consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued SFAS 123 (revised 2004), "Share-Based Payment" ("SFAS 123R"), which replaces SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123") and supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees." SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values, beginning with the first interim or annual period after June 15, 2005. The pro forma disclosures previously permitted under SFAS 123, no longer will be an alternative to financial statement recognition. We intend to adopt SFAS 123R in our third quarter beginning July 1, 2005. Under SFAS 123R, we must determine the appropriate fair value model to be used for valuing share-based payments, the amortization method for compensation cost and the transition method to be used at date of adoption. We are evaluating the requirements of SFAS 123R and, given that we have historically granted a significant amount of stock options to employees, expect that the adoption of SFAS 123R will have a material adverse impact on our consolidated results of operations and earnings per share. We have not yet determined the fair value model or transition method that we will adopt, or the effect of adopting SFAS 123R including whether the adoption will result in amounts that are similar to the current pro forma disclosures under SFAS 123.

Risk Factors

The statements that are not historical facts contained in this Annual Report on Form 10-K are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements reflect the current belief, expectations or intent of the Company's management and are subject to and involve certain risks and uncertainties. Many of these risks and uncertainties are outside of our control and are difficult for us to forecast or mitigate. In addition to the risks described elsewhere in this Annual Report on Form 10-K and in certain of our other Securities and Exchange Act Commission filings, the following important factors, among others, could cause our actual results to differ materially from those expressed or implied by us in any forward-looking statements contained herein or made elsewhere by or on behalf of the Company.

Our quarterly and annual operating results may fluctuate significantly as a result of new product introductions and other factors which could cause our stock price to decline significantly

Our quarterly and annual operating results have fluctuated and may fluctuate significantly due to a variety of factors, most of which are outside of our control. Some of the factors that could cause our quarterly and annual operating results to fluctuate include the other risks discussed in this "Risk Factors" section.

We may experience a shortfall or delay in generating or recognizing revenues for a number of reasons. Orders on hand at the beginning of a quarter and orders generated in a quarter do not always result in the shipment of products and the recognition of revenues for that quarter. Failure to ship products by the end of the quarter in which they are ordered may adversely affect our operating results for that quarter. Our customer agreements typically provide that the customer may delay scheduled delivery dates and cancel orders within specified time frames without penalty. Because we incur operating expenses based on anticipated revenues and a high percentage of our expenses are fixed in the short term, any delay in generating or recognizing forecasted revenues could significantly harm our results of operations.

Additionally, our operating results may vary as a result of the timing of our release of new products. The introduction of a new product in any quarter may cause an increase in revenues in that quarter that may not be sustainable in subsequent quarters.

If we are unable to successfully introduce new products to keep pace with the rapid technological changes that characterize our market, our results of operations will be significantly harmed

The market for our products is characterized by:

- rapid technological change such as the recent development of optical fiber and wireless technologies;
- frequent new product introductions such as higher speed and more complex routers;
- evolving industry standards such as new Internet protocols;
- changing customer needs such as the increase in the levels of service agreed to between network service providers and their customers; and
- short product life cycles as a result of rapid changes in our customers' products.

Our performance will depend on our successful development, introduction and market acceptance of new and enhanced performance analysis products that address new technologies and changes in customer requirements. If we experience any delay in the development or introduction of new products or enhancements to our existing products, our operating results may suffer. For instance, undetected software or hardware errors, which frequently occur when new products are first introduced, could result in the delay or loss of market acceptance of our products and the loss of credibility with our customers. In addition, if we are not able to develop, or license or acquire from third parties, the underlying core technologies necessary to create new products and enhancements, our existing products are likely to become technologically obsolete over time and our operating results will suffer. If the rate of development of new technologies and transmission protocols by our customers is delayed, the growth of the market for our products and therefore our sales and operating results may be harmed.

Our ability to successfully introduce new products in a timely fashion will depend on several factors, including our ability to:

- anticipate technological changes and industry trends;
- properly identify customer needs;
- innovate and develop new technologies and applications;
- hire and retain necessary technical personnel;
- successfully commercialize new technologies in a timely manner;
- timely obtain key components for the manufacture of new products;
- manufacture and deliver our products in sufficient volumes and on time;
- price our products competitively; and
- differentiate our offerings from our competitors' offerings.

The development of new, technologically advanced products is a complex and uncertain process requiring high levels of innovation and highly skilled engineering and development personnel, as well as the accurate anticipation of technology and market trends. We cannot be certain that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely or cost-effective basis. Further, we cannot be certain that our new products will gain market acceptance or that we will be able to respond effectively to technological changes, emerging industry standards or product announcements by our competitors. If we fail to respond to technological change and the needs of our markets, we will lose revenues and our competitive position will suffer.

We depend on sales of a narrow range of products and if customers do not purchase our products, our revenues and results of operations would be significantly harmed.

Our business and products are concentrated in the market for systems that analyze and measure the performance of network equipment and systems. This market is in an evolving market and there is uncertainty regarding its size and scope. Our performance will depend on increased sales of our existing systems and the successful development, introduction and market acceptance of new and enhanced products. We cannot be certain that we will be successful in increasing these sales or in developing and introducing new products. Our failure to do so would significantly harm our revenues and results of operations.

Competition in our market could significantly harm our results of operations.

The market for our products is highly competitive. We face competition primarily from test equipment manufacturers such as Agilent Technologies, Spirent Communications and Anritsu. We also compete with a number of small companies which are focused on network performance analysis and measurement. Additionally, some of our network equipment manufacturer customers have developed, or may develop, in-house performance analysis products for their own use or for sale to others. For example, Cisco Systems, our largest customer, has used internally developed test products for a number of years. Although Cisco Systems has in the past accounted for a significant portion of our net revenues, we cannot be certain that it will continue to do so.

As we broaden our product offerings, we may move into new markets and face additional competition. Moreover, our competitors may have more experience operating in these new markets and be better established with the customers in these new markets.

Some of our competitors and potential competitors have greater brand name recognition and greater financial, technical, marketing, sales and distribution capabilities than we do. Moreover, our competitors may consolidate with each other, or with other companies, giving them even greater capabilities with which to compete against us.

Increased competition in the network performance analysis and measurement market could result in increased pressure on us to reduce prices and could result in a reduction in our revenues and/or a decrease in our margins, each of which could significantly harm our results of operations. In addition, increased competition could prevent us from increasing our market share, or cause us to lose our existing market share, either of which would harm our revenues and profitability.

We cannot predict whether our current or future competitors will develop or market technologies and products that offer higher performance or more features or are more cost-effective than our current or future products. To remain competitive, we must continue to develop cost-effective products and product enhancements which offer higher performance and more functionality. Our failure to do so will harm our revenues and results of operations.

If we do not diversify our customer base, we may not be able to grow our business or increase our profitability

Our growth depends in part on our ability to diversify our customer base by increasing sales to enterprises, Internet and network service providers and communications chip manufacturers. To effectively compete for the business of these customers, we must develop new products and enhancements to existing products and expand our sales, marketing and customer support capabilities, which will result in increases in operating costs. If we cannot offset these increases in costs with an increase in our revenues, our net income may decrease. Some of our existing and potential competitors have existing relationships with many Internet and network service providers, communications chip manufacturers and enterprises. We cannot be certain that we will be successful in increasing our sales presence in these markets. Any failure by us to increase sales in these markets would adversely affect our growth.

Because we depend on a limited number of network equipment manufacturers for a majority of our revenues, any cancellation, reduction or delay in purchases by these customers could significantly harm our revenues and results of operations

Historically, a small number of network equipment manufacturing customers has accounted for a significant portion of our net revenues. Sales to our five largest customers represented 44.4% of our net revenues in 2004, 40.4% of our net revenues in 2003 and 48.5% of our net revenues in 2002. Sales to Cisco Systems, our largest customer, accounted for 31.8% of our net revenues in 2004, 29.1% of our net revenues in 2003 and 34.2% of our net revenues in 2002. We expect that significant customer concentration will continue for the foreseeable future and that our operating results will continue to depend to a significant extent upon revenues from a small number of customers.

Our dependence on large orders from a limited number of network equipment manufacturers makes our relationships with these manufacturers critical to the success of our business. We cannot be certain that we will be able to retain our largest customers, that we will be able to increase our sales to our other existing customers or that we will be able to attract additional customers. From time to time, we have experienced delay and reductions in orders from some of our major customers. In addition, our customers have sought price concessions from us and may continue to do so. We typically do not have long-term contracts with our customers, and our major customers can stop purchasing our products at any time without penalty and are free to purchase products from our competitors. The loss of one or more of our largest customers, any reduction delay in sales to these customers, our inability to successfully develop and maintain relationships with existing and new customers or requirements that we make price concessions could significantly harm our revenues and results of operations.

Our business may be adversely affected by unfavorable general economic and market conditions

Our business is subject to the effects of general economic conditions in the United States and globally and, in particular, market conditions in the communications and networking industries. In the past, our operating results were adversely affected as a result of unfavorable economic conditions and reduced capital spending in the United States, Europe and Asia. In particular, sales to network equipment manufacturers in America were significantly and adversely affected by the downturn in the economy in the past. If there is a slowdown in the global economic and market conditions, we may experience material adverse impacts on our business, operating results and financial condition.

Man-made problems such as computer viruses or terrorism may disrupt our operations and harm our operating results

Despite our implementation of network security measures, our network may be vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems. Any such event could have a material adverse effect on our business, operating results and financial condition. In addition, the effects of war or acts of terrorism could have a material adverse effect on our business, operating results and financial condition. The continued threat of terrorism and heightened security and military action in response to this threat, or any future acts of terrorism, may cause further disruption to the economy and create further uncertainties in the economy. Energy shortages, such as gas or electricity shortages, could have similar negative impacts. To the extent that such disruptions or uncertainties result in delays or cancellations of customer orders, or the manufacture or shipment of our products, our business, operating results and financial condition could be materially and adversely affected.

International activity may increase our cost of doing business or disrupt our business

We plan to continue to expand our international operations and sales activities. Expansion of international operations will involve inherent risks that we may not be able to control, including:

- supporting multiple languages;
- recruiting and training international personnel;
- increased complexity and costs of managing international operations;
- increased exposure to foreign currency exchange rate fluctuations;
- commercial laws and business practices that favor local competition;
- changing governmental laws and regulations, including differing labor and employment laws and longer sales cycles;
- difficulties in collecting receivables;
- reduced or limited protections of intellectual property rights;
- more complicated logistical and distribution arrangements; and
- political and economic instability.

As our customers consolidate, they may reduce purchases of our products and demand more favorable terms and conditions from us, which would harm our revenues and profitability

Consolidation of our customers could reduce the number of customers to whom our products could be sold. These merged customers could obtain products from a source other than us or demand more favorable terms and conditions from us, which would harm our revenues and profitability. In addition, our network equipment manufacturer customers may merge with or acquire our competitors and discontinue their relationships with us.

Acquisitions undertaken and any that we may undertake could be difficult to integrate, disrupt our business, dilute shareholder value and significantly harm our operating results

Acquisitions are inherently risky and no assurance can be given that our previous or future acquisitions will be successful or will not materially and adversely affect our business, operating results or financial condition. We expect to continue to review opportunities to acquire other businesses or technologies that would complement our current products, expand the breadth of our markets, enhance our technical capabilities or otherwise offer opportunities. While we are not currently a party to any acquisition agreements, we may acquire additional businesses, products or technologies in the future. If we make any further acquisitions, we could issue stock that would dilute existing shareholders' percentage ownership, and we incur substantial debt or assume contingent liabilities. We have limited experience in acquiring other businesses and technologies. Acquisitions involve numerous risks, including the following:

- problems assimilating the acquired operations, technologies or products;
- unanticipated costs associated with the acquisition;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers, contract manufacturers, customers and industry experts;
- risks associated with entering markets in which we have no or limited prior experience; and
- potential loss of the acquired organization's or our own key employees.

We recorded impairment charges of \$1.7 million in 2002 and \$410,000 in 2003 relating to the October 2001 acquisition of Caimis, Inc. The charges recorded in 2002 resulted from the decline in business conditions in 2002 and our restructuring of our resources to focus on higher-growth opportunities than the Caimis products. In 2003, the continued lack of customer interest in these products resulted in the write-off of the remaining Caimis investment. We cannot be certain that we would be successful in overcoming problems in connection with our past or future acquisitions, and our inability to do so could significantly harm our assets acquired in such acquisitions, revenues and results of operations.

If we are unable to expand our sales and distribution channels or are unable to successfully manage our expanded sales organization, our revenues and results of operations will be harmed

Historically, we have relied primarily on a limited direct sales organization, supported by third-party manufacturers' representatives and distributors, to sell our products. Our distribution strategy focuses primarily on developing and expanding our direct sales organization and our network of manufacturers' representatives and distributors. We may not be able to successfully expand our sales and distribution channels, and the cost of any expansion may exceed the revenues that we generate. To the extent that we are successful in expanding our sales and distribution channels, we cannot be certain that we will be able to compete successfully against the significantly larger and better-funded sales and marketing operations of many of our current or potential competitors. In some cases, we have granted exclusive rights to our distributors and manufacturers' representatives to market our products in their specified territories. Our distributors and manufacturers' representatives may not market our products effectively or devote the resources necessary to provide us with effective sales, marketing and technical support. Our inability to effectively manage the expansion of our sales and support staff, or to maintain existing or establish new relationships with successful manufacturers' representatives and distributors, would harm our revenues and results of operations.

If we are unable to expand our international sales and distribution channels or manage them effectively, our results of operations would be harmed

Historically, a significant portion of our sales have been made to customers in the United States. Sales in the United States accounted for 73.7% of our net revenues in 2004, 69.7% of our net revenues in 2003 and 78.8% of our net revenues in 2002. In the past, we have depended on distributors for a substantial portion of our international sales. In 2002, two of our distributors entered bankruptcy and were therefore terminated as distributors of our products. These terminations and additional future losses of one or more of our international distributors or their failure to sell our products would limit our ability to sustain and grow our revenues in international markets. In October 2002, we established a Japanese subsidiary in Tokyo, Japan. We intend to expand into additional international markets, including in Europe and in the Asia Pacific region, by adding distributors and international sales and support personnel. Our failure in these efforts could significantly harm our results of operations and decrease the value of our stock.

Changes in laws, regulations and financial accounting standards may affect our reported results of operations

Changes in accounting regulations and standards can have a significant effect on our reported results. New pronouncements and varying interpretations of pronouncements have occurred in the past and are likely to occur in the future as a result of recent Congressional and regulatory actions. New laws, regulations and accounting standards, as well as the questioning of, or changes to, currently accepted accounting practices in the technology industry may adversely affect our reported financial results, which could have an adverse effect on our stock price.

In particular, the FASB recently enacted SFAS 123R which requires the recording of compensation expense associated with stock option grants on our income statement. The current methodology for expensing such stock options is based on, among other things, the estimated volatility of the underlying stock. Our stock price has historically been volatile. Therefore, the adoption of an accounting standard requiring companies to expense stock options will negatively impact our profitability and may adversely impact our stock price. In addition, the adoption of such a standard could limit our ability to continue to use stock options as an incentive and retention tool, which could, in turn, hurt our ability to recruit and retain employees.

Additionally, the Sarbanes-Oxley Act of 2002 and related regulations may result in changes in accepted practices within our industry and may adversely impact our stock price. Additionally, these regulations may increase our cost of doing business and adversely impact our profitability.

Some key components in our products come from sole or limited sources of supply, which exposes us to potential supply shortages that could disrupt the manufacture and sale of our products

We and our contract manufacturers currently purchase a number of key components used to manufacture our products from sole or limited sources of supply for which alternative sources may not be available. From time to time, we have experienced shortages of key components, including chips, oscillators and optical modules. We and our contract manufacturers have no guaranteed or long-term supply arrangements for these or other components, including field programmable gate arrays, or FPGAs, which are integrated circuits that can be repeatedly reprogrammed to perform different sets of functions as required. Financial or other difficulties faced by our suppliers or significant changes in market demand for necessary components could limit the availability to us and our contract manufacturers of these components. Any interruption or delay in the supply of any of these components could significantly harm our ability to meet scheduled product deliveries to our customers and cause us to lose sales.

In addition, the purchase of these components on a sole source basis subjects us to risks of price increases and potential quality assurance problems. Consolidation involving suppliers could further reduce the number of alternatives available to us and affect the cost of components. An increase in the cost of components could make our products less competitive and result in lower margins.

There are limited substitute supplies available for many of these components, including field programmable gate arrays. All of these components are critical to the production of our products, and competition exists with other manufacturers for these key components. In the event that we can no longer obtain materials from a sole source supplier, we might not be able to qualify or identify alternative suppliers in a timely fashion, or at all.

If we fail to accurately forecast our manufacturing requirements, we could incur additional costs and experience manufacturing delays

We provide our contract manufacturers with rolling forecasts based on anticipated product orders to determine our manufacturing requirements. Some of the components used in our products have significant lead times or lead times which may unexpectedly increase depending on factors such as the specific supplier, contract terms and the demand for components at a given time. Because of these long lead times, we are often required to forecast and order products before we know what our specific manufacturing requirements will be. If we overestimate our product orders, our contract manufacturers may have excess inventory of completed products which we would be obligated to purchase. This will lead to increased costs and the risk of obsolescence. If we underestimate our product orders, our contract manufacturers may have inadequate inventory, which could result in delays in shipments, the loss or deferral of revenues and higher costs of sales. It may also add costs to our products to expedite delivery of our products to customers or those components with long lead times to our contract manufacturers. We cannot be certain that we will be able to accurately forecast our product orders and may in the future carry excess or obsolete inventory, be unable to fulfill customer demand, or both, thereby harming our revenues, results of operations and customer relationships.

Failure by our contract manufacturers to provide us with adequate supplies of high quality products could harm our revenues, results of operations, competitive position and reputation

We currently rely on a limited number of contract manufacturers to manufacture and assemble our products. We may experience delays in receiving product shipments from contract manufacturers or other problems, such as inferior quality and insufficient quantity of product. We cannot be certain that we will be able to effectively manage our contract manufacturers or that these manufacturers will meet our future requirements for timely delivery of products of sufficient quality and quantity. We intend to introduce new products and product enhancements, which will require that we rapidly achieve volume production by effectively coordinating with our suppliers and contract manufacturers. We do not have any long-term contracts with our contract manufacturers. The inability of our contract manufacturers to provide us with adequate supplies of high-quality products or the loss of any of our contract manufacturers would cause a delay in our ability to fulfill customer orders while we obtain a replacement manufacturer and would harm our revenues, results of operations, competitive position and reputation.

We may not be able to expand our contract manufacturing capacity or our internal testing or quality assurance functions as required to keep up with demand for our products. Any such failure would in turn hinder our growth. If we do not expand these capacities and functions effectively or in a timely manner, we may experience disruptions in product flow which could limit our revenues, adversely affect our competitive position and reputation and result in additional cost, cancellation of orders or both.

Because of intense competition for technical personnel, we may not be able to recruit or retain necessary personnel on a cost-effective basis

Our success will depend in large part upon our ability to identify, hire, retain and motivate highly skilled employees. We plan to increase the number of our research and development, marketing, sales, customer support and operations employees. Competition for highly skilled employees in our industry is intense. In addition, employees may leave our company and subsequently compete against us. Our failure to attract and retain these qualified employees could significantly harm our ability to develop new products and maintain customer relationships. Volatility or lack of positive performance in our stock price may also adversely affect our ability to attract and retain highly skilled employees who may look to stock options as a key component of their compensation. The loss of the services of any of our qualified employees, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel could hinder the development and introduction of new and enhanced products and harm our ability to sell our products. Moreover, companies in our industry whose employees accept positions with competitors frequently claim that those competitors have engaged in unfair hiring practices. We may be subject to such claims as we seek to retain or hire qualified personnel, some of whom may currently be working for our competitors. Some of these claims may result in material litigation. We could incur substantial costs in defending ourselves against these claims, regardless of their merits. Such claims could also discourage potential employees who currently work for our competitors from joining us.

The loss of any of our key personnel could significantly harm our results of operations and competitive position

Our success depends to a significant degree upon the continuing contributions of our key management, technical, marketing and sales employees. There can be no assurance that we will be successful in retaining our key employees or that we can attract or retain additional skilled personnel as required. Failure to retain key personnel could significantly harm our results of operations and competitive position.

Continued rapid growth will strain our operations and require us to incur costs to maintain and upgrade our management and operational resources

We have experienced and are continuing to experience a period of growth. Unless we manage our growth effectively, we may have difficulty in operating our business. As a result, we may inaccurately forecast sales and materials requirements, fail to integrate new personnel or fail to maintain adequate internal controls, which may result in fluctuations in our operating results and cause the price of our stock to decline. We plan to continue to expand our operations which may place a significant strain on our management and operational resources. In order to manage our growth effectively, we must implement and improve our operational systems, procedures and controls on a timely basis. If we cannot manage growth effectively, our profitability could be significantly harmed.

Our products may contain defects which may cause us to incur significant costs, divert our attention from product development efforts and result in a loss of customers

Our existing products and any new or enhanced products we introduce may contain undetected software or hardware defects when they are first introduced or as new versions are released. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relation problems or loss of customers and reputation, all of which would harm our results of operations. A successful claim against us for an amount exceeding the limit on our product liability insurance policy would force us to use our own resources, to the extent available, to pay the claim, which could result in an increase in our expenses and a reduction of our working capital available for other uses, thereby harming our profitability and capital resources.

Our failure to protect our intellectual property may significantly harm our results of operations and reputation

Our success and ability to compete is dependent in part on our ability to patent, protect and maintain our proprietary rights to our intellectual property. We currently rely on a combination of patent, trade secret, trademark and copyright laws to establish and protect our intellectual property. To date, we have relied primarily on trade secret laws to protect our proprietary processes and know-how. We have one U.S. patent and have filed applications for additional patents in the U.S., Japan and the European Union. We cannot be certain that any of these applications will issue into patents or that any such patents, if issued, or our existing patent will be upheld. We also cannot be certain that our existing patent and any such additional patents, if issued, will be effective in protecting our proprietary technology.

We generally enter into confidentiality agreements with our officers, employees and consultants. We also generally limit access to and distribution of our source code and further limit the disclosure and use of our other proprietary information. However, these measures provide only limited protection of our intellectual property rights. In addition, we may not have signed agreements containing adequate protective provisions in every case, and the contractual provisions that are in place may not provide us with adequate protection in all circumstances. Further, we have not included copyright notices on all of our copyrightable intellectual property. Any infringement of our proprietary rights could result in significant litigation costs, and any failure to adequately protect our proprietary rights could result in our competitors offering similar products, potentially resulting in loss of one or more competitive advantages and decreased revenues.

Despite our efforts to protect our proprietary rights, existing trade secret, copyright, patent and trademark laws afford us only limited protection. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States. Others may attempt to copy or reverse engineer aspects of our products or to obtain and use information that we regard as proprietary. Accordingly, we may not be able to prevent misappropriation of our technologies or to deter others from developing similar technologies. Further, monitoring the unauthorized use of our products and our proprietary rights is difficult. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could result in substantial costs and diversion of resources and could significantly harm our results of operations and reputation.

Claims that we infringe third-party intellectual property rights could result in significant expenses or restrictions on our ability to sell our products

From time to time, other parties may assert patent, copyright, trademark and other intellectual property rights to technologies and in various jurisdictions that are important to our business. We cannot provide assurance that others will not claim that we are infringing their intellectual property rights or that we do not in fact infringe those intellectual property rights. We have not conducted a search to determine whether the technology we have in our products infringes or misappropriates intellectual property held by third parties. In addition, because patent applications in the United States are not publicly disclosed until the patent is issued, applications may have been filed which could relate to our products.

Any claims asserting that our products infringe or may infringe proprietary rights of third parties, if determined adversely to us, could significantly harm our results of operations. Any claims, with or without merit, could:

- be time-consuming;
- result in costly litigation;
- divert the efforts of our technical and management personnel;
- require us to develop alternative technology, thereby causing product shipment delays and the loss or deferral of revenues;
- require us to cease selling the products containing the infringing intellectual property;
- require us to pay substantial damage awards;
- damage our reputation; or
- require us to enter into royalty or licensing agreements which, if required, may not be available on terms acceptable to us, if at all.

In the event a claim against us were successful and we could not obtain a license to the relevant technology on acceptable terms or license a substitute technology or redesign our products to avoid infringement, our revenues, results of operations and competitive position would be harmed.

If we fail to maintain our relationships with industry experts, our products may lose industry and market recognition and sales could decline

Our relationships with industry experts in the field of performance analysis and measurement of networks and network equipment are critical for maintaining our industry credibility and for developing new products and testing methodologies in a timely fashion. These experts have established standard testing methodologies that evaluate new network equipment products and technologies. We provide these experts and their testing labs with our products and engineering assistance to perform tests on these new network equipment products and technologies. These industry experts refer to our products in their publications which has given our products industry recognition. In addition, these labs offer us the opportunity to test our products on the newest network equipment and technologies, thereby assisting us in developing new products that are designed to meet evolving technological needs. We cannot be certain that we will be able to maintain our relationships with industry experts or that our competitors will not obtain similar or superior relationships with industry experts. If we are unable to maintain our relationships with industry experts, our products may lose industry and market recognition which could harm our reputation and competitive position and cause our sales to decline.

Our headquarters, many of our customers and some of our contract manufacturers and suppliers are located in California where natural disasters have occurred and may occur in the future

Currently, our corporate headquarters, many of our customers and some of our contract manufacturers and suppliers are located in California. California historically has been vulnerable to natural disasters and other risks, such as earthquakes, fires and floods, which at times have disrupted the local economy and posed physical risks to our property. We and some of our customers, contract manufacturers and suppliers do not have redundant, multiple site capacity. In the event of a natural disaster, our ability to conduct business could be significantly disrupted, thereby harming our results of operations.

Provisions of our articles of incorporation and bylaws may make it difficult for a third party to acquire us, despite the possible benefits to our shareholders

Our board of directors has the authority to issue up to one million shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the shareholders. The rights of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of any preferred stock that we may issue. The issuance of preferred stock could have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock. Furthermore, some provisions of our articles of incorporation and bylaws could delay or make more difficult a merger, tender offer or proxy contest involving us.

These provisions of our articles of incorporation and bylaws may have the effect of delaying, deferring or preventing a change in our control despite possible benefits to our shareholders, may discourage bids at a premium over the market price of our common stock and may harm the market price of our common stock and the voting and other rights of our shareholders.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Sensitivity

The primary objective of our investment activities is to maintain the safety of principal and preserve liquidity while maximizing yields without significantly increasing risk. Some of the securities that we have invested in may be subject to market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. To minimize this risk, we maintain our portfolio of cash equivalents and investments in a variety of securities, including commercial paper, government debt securities, corporate debt securities and money market funds. We do not use any derivatives or similar instruments to manage our interest rate risk. We intend and have the ability to hold these securities to maturity and, therefore, we would not expect our consolidated operating results or cash flows to be affected to any significant degree by a sudden change in market interest rates. Currently, the carrying amount of these securities approximates fair market value. However, the fair market value of these securities is subject to interest rate risk and would decline in value if market interest rates increased. If market interest rates were to increase immediately and uniformly by 10 percent from the levels as of December 31, 2004, the decline in the fair market value of the portfolio would not be material to our consolidated financial position, results of operations or cash flows.

Exchange Rate Sensitivity

The majority of our revenues and expenses are denominated in U.S. dollars. However, since we have sales and service operations outside of the United States, we do have some transactions that are denominated in foreign currencies, primarily the Japanese Yen, Euro, Romanian Lei and British Pound. As a result, our financial results could be affected by changes in foreign currency exchange rates. We have not engaged in foreign currency hedging to date, but we may do so in the future to decrease fluctuations in consolidated operating results due to changes in foreign currency exchange rates.

Item 8. Financial Statements and Supplementary Data

Our financial statements and supplementary data required by this Item are provided in the consolidated financial statements of the Company included in this Annual Report on Form 10-K as listed in Item 15(a) of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None

Item 9A. Controls and Procedures**(a) Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures**

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act). Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

(b) Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in Internal Control - Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2004.

(c) Attestation Report of the Independent Registered Public Accounting Firm

Our management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2004 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

(d) Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting that occurred during the fourth quarter of 2004 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III**Item 10. Directors and Executive Officers of the Registrant**

Certain information required by this Item is incorporated herein by reference to information appearing in our definitive Proxy Statement for our Annual Meeting of Shareholders to be held on May 19, 2005, which information appears under the captions entitled "Election of Directors," "Executive Officers" and "Section 16(a) Beneficial Ownership Reporting Compliance." The Proxy Statement will be filed with the Commission within 120 days after the date of our last fiscal year-end which was December 31, 2004.

The Registrant has adopted a Code of Ethics for its Chief Executive and Senior Financial Officers, a copy of which is included as Exhibit 14.1 to this Annual Report on Form 10-K.

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to information appearing in our definitive Proxy Statement for our Annual Meeting of Shareholders to be held on May 19, 2005, which information appears under the captions "Election of Directors - Compensation of Directors," "Executive Compensation and Other Information," "Board of Directors and Compensation Committee Reports on Executive Compensation" and "Performance Graph." The Proxy Statement will be filed with the Commission within 120 days after the date of our last fiscal year-end which was December 31, 2004.

Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this Item is incorporated herein by reference to information appearing in our definitive Proxy Statement for our Annual Meeting of Shareholders to be held on May 19, 2005, which information appears under the captions "Common Stock Ownership of Principal Shareholders and Management" and "Equity Compensation Plan Information." The Proxy Statement will be filed with the Commission within 120 days after the date of our last fiscal year-end which was December 31, 2004.

Item 13. Certain Relationships and Related Transactions

The information required by this Item is incorporated herein by reference to information appearing in our definitive Proxy Statement for our Annual Meeting of Shareholders to be held on May 19, 2005, which information appears under the caption "Certain Relationships and Related Transactions." The Proxy Statement will be filed with the Commission within 120 days after our last fiscal year-end which was December 31, 2004.

Item 14. Principal Accounting Fees and Services

The information required by this Item is incorporated herein by reference to information appearing in our definitive Proxy Statement for our Annual Meeting of Shareholders to be held on May 19, 2005, which information appears under the caption "Principal Accountant Fees and Services." The Proxy Statement will be filed with the Commission within 120 days after our last fiscal year-end which was December 31, 2004.

PART IV**Item 15. Exhibits and Financial Statement Schedules**

(a) The following documents are filed as part of this Report:

(1) Consolidated Financial Statements

The consolidated financial statements listed in the accompanying Index to Consolidated Financial Statements are filed as part of this report.

(2) Financial Statement Schedule

The financial statement schedules have been omitted because they are not applicable or the information required to be set forth therein is included in the consolidated financial statements or notes thereto.

(3) Exhibits

- 2.1 Stock Purchase Agreement dated as of February 20, 2004 by and among Ixia, G3 Nova Technology, Mihai Moldovan, Dana Moldovan and Ovidiu Rancu (schedules are omitted from this agreement, and the Registrant agrees to furnish supplementally a copy of any such schedule to the Commission upon request)⁽¹⁾
- 3.1 Amended and Restated Articles of Incorporation, as amended⁽²⁾
- 3.2 Bylaws, as amended⁽³⁾
- 10.1* Amended and Restated 1997 Equity Incentive Plan⁽⁴⁾
- 10.2* Amended and Restated Non-Employee Director Stock Option Plan⁽⁵⁾
- 10.3* Employee Stock Purchase Plan⁽⁶⁾
- 10.3.1* Amendment No. 1, dated May 9, 2003, to Ixia Employee Stock Purchase Plan⁽⁷⁾
- 10.4* Officer Severance Plan⁽⁸⁾
- 10.5* Form of Indemnity Agreement between Ixia and its directors and executive officers⁽⁹⁾
- 10.6 Office Lease Agreement dated November 5, 1999 between Malibu Canyon Office Partners, LLC and Ixia First Amendment to Office Lease dated as of March 22, 2000 and Second Amendment to Office Lease dated May 8, 2003⁽¹⁰⁾
- 10.6.1 Third Amendment to Office Lease dated September 2004 between Malibu Canyon Office Partners, LLC and Ixia
- 10.7* Warrants dated August 2, 2000 to Purchase 80,000 Shares of Common Stock issued to Robert W. Bass⁽¹¹⁾

- 10.8 Registration Rights and Stock Transfer Restriction Agreement dated as of September 1, 2000 among Ixia, Technology Capital Group S.A. and Stéphane Rata⁽¹²⁾
- 10.10* Employment offer letter agreement dated October 27, 2001 between Ixia and David Anderson⁽¹³⁾
- 10.11* Employment offer letter agreement dated as of February 27, 2003 between Ixia and Robert W. Bass⁽¹⁴⁾
- 10.12* Employment Offer Letter Agreement, effective July 30, 2003, between Ixia and Alan Amrod⁽¹⁵⁾
- 10.13 License, Distribution and Option Agreement, dated July 7, 2003, between NetIQ Corporation and Ixia⁽¹⁶⁾
- 10.14* 2004 Employee Bonus Plan
- 14.1 Code of Ethics for Chief Executive and Senior Financial Officers⁽¹⁷⁾
- 21.1 Subsidiaries of the Registrant
- 23.1 Consent of PricewaterhouseCoopers LLP
- 31.1 Certificate of Chief Executive Officer of Ixia pursuant to Rule 13a-14(a) under the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 Certificate of Chief Financial Officer of Ixia pursuant to Rule 13a-14(a) under the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1 Certificate of Chief Executive Officer and Chief Financial Officer of Ixia pursuant to Rule 13a-14(b) under the Exchange Act and Section 906 of the Sarbanes-Oxley Act of 2002.

* Constitutes a management contract or compensatory plan or arrangement required to be filed as an exhibit to this Annual Report on Form 10-K.

⁽¹¹⁾ Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q (File No. 000-31523) for the fiscal quarter ended March 31, 2004.

⁽¹²⁾ Incorporated by reference to Exhibit No. 3.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 5, 2000.

⁽¹³⁾ Incorporated by reference to Exhibit No. 3.2 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 19, 2000.

⁽¹⁴⁾ Incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 (Reg. No. 333-117969) filed with the Commission on August 5, 2004.

⁽¹⁵⁾ Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-8 (Reg. No. 333-117969) filed with the Commission on August 5, 2004.

⁽¹⁶⁾ Incorporated by reference to Exhibit No. 10.3 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 5, 2000.

⁽¹⁷⁾ Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-8 (Registration No. 333-107818) filed with the Commission on August 8, 2003.

⁽¹⁸⁾ Incorporated by reference to Exhibit No. 10.4 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 5, 2000.

⁽¹⁹⁾ Incorporated by reference to Exhibit No. 10.5 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 5, 2000.

⁽²⁰⁾ Incorporated by reference to Exhibit No. 10.14 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on July 31, 2000.

⁽²¹⁾ Incorporated by reference to Exhibit No. 10.15 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 5, 2000.

⁽²²⁾ Incorporated by reference to Exhibit No. 10.17 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-42678) filed with the Commission on September 27, 2000.

⁽¹³⁾ Incorporated by reference to Exhibit No. 10.13 to the Registrant's Annual Report on Form 10-K (File No. 000-31523) for the fiscal year ended December 31, 2001.

⁽¹⁴⁾ Incorporated by reference to Exhibit No. 10.14 to the Registrant's Annual Report on Form 10-K (File No. 000-31523) for the fiscal year ended December 31, 2002.

⁽¹⁵⁾ Incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-31523) for the fiscal quarter ended September 30, 2003.

⁽¹⁶⁾ Incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-31523) for the fiscal quarter ended September 30, 2003.

⁽¹⁷⁾ Incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 000-31523) for the fiscal year ended December 31, 2004.

(b) Exhibits

See the list of Exhibits under Item 15(a)(3) of this Annual Report on Form 10-K.

(c) Financial Statement Schedules

See the Schedule under Item 15(a)(2) of this Annual Report on Form 10-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: March 15, 2005

IXIA

/s/ ERROL GINSBERG

Errol Ginsberg

President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name	Title	Date
<u>/s/ ERROL GINSBERG</u> Errol Ginsberg	President, Chief Executive Officer and Director (Principal Executive Officer)	March 15, 2005
<u>/s/ THOMAS B. MILLER</u> Thomas B. Miller	Chief Financial Officer (Principal Financial and Accounting Officer)	March 15, 2005
<u>/s/ JEAN-CLAUDE ASSCHER</u> Jean-Claude Asscher	Chairman of the Board	March 15, 2005
<u>/s/ JON F. RAGER</u> Jon F. Rager	Director	March 15, 2005
<u>/s/ MASSOUD ENTEKHABI</u> Massoud Entekhabi	Director	March 15, 2005

IXIA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
Report of Independent Registered Public Accounting Firm	39
Consolidated Balance Sheets as of December 31, 2004 and 2003	40
Consolidated Statements of Income for the years ended December 31, 2004, 2003 and 2002	41
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2004, 2003 and 2002	42
Consolidated Statements of Cash Flows for the years ended December 31, 2004, 2003 and 2002	43
Notes to Consolidated Financial Statements	44

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Ixia:

We have completed an integrated audit of Ixia's 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2004 and audits of its 2003 and 2002 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

Consolidated financial statements

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, shareholders' equity and cash flows present fairly, in all material respects, the consolidated financial position of Ixia and its subsidiaries at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Internal control over financial reporting

Also, in our opinion, management's assessment, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A, that the Company maintained effective internal control over financial reporting as of December 31, 2004 based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control - Integrated Framework issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Los Angeles, California
March 11, 2005

IXIA

Consolidated Balance Sheets (in thousands)

	December 31, 2004	December 31, 2003
Assets		
Current assets:		
Cash and cash equivalents	\$ 16,383	\$ 21,133
Short-term investments in marketable securities	81,757	42,718
Accounts receivable, net	22,069	17,121
Inventories	6,669	5,585
Deferred income taxes	3,756	4,760
Income taxes receivable	1,696	2,011
Prepaid expenses and other current assets	2,878	2,167
Total current assets	135,208	95,495
Investments in marketable securities	49,015	58,072
Property and equipment, net	12,268	6,907
Deferred income taxes	4,798	2,381
Goodwill	11,377	1,592
Intangible assets, net	23,031	19,960
Other assets	612	611
Total assets	\$ 236,309	\$ 185,018
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 1,556	\$ 806
Accrued expenses	13,181	8,825
Deferred revenue	7,032	5,436
Income taxes payable	4,203	2,897
Total current liabilities	25,972	17,964
Deferred income taxes	3,411	-
Total liabilities	29,383	17,964
Commitments and contingencies (Note 7)		
Shareholders' equity:		
Preferred stock, without par value; 1,000 shares authorized and none outstanding	-	-
Common stock, without par value; 200,000 shares authorized at December 31, 2004 and December 31, 2003, respectively, 62,459 and 59,642 shares issued and outstanding as of December 31, 2004 and December 31, 2003, respectively	100,144	84,048
Additional paid-in capital	53,247	48,769
Deferred stock-based compensation	-	(419)
Retained earnings	53,535	34,656
Total shareholders' equity	206,926	167,054
Total liabilities and shareholders' equity	\$ 236,309	\$ 185,018

The accompanying notes are an integral part of these consolidated financial statements

IXIA

Consolidated Statements of Income (in thousands, except per share data)

	Year Ended December 31,		
	2004	2003	2002
Net revenues	\$ 116,978	\$ 83,533	\$ 67,594
Cost of revenues ⁽¹⁾	20,716	15,761	13,310
Amortization of purchased technology	3,044	1,183	-
Gross profit	93,218	66,589	54,284
Operating expenses: ⁽¹⁾			
Research and development	24,960	21,980	20,386
Sales and marketing	31,865	25,050	20,817
General and administrative	12,479	9,179	7,852
Amortization of intangible assets	1,532	1,070	941
Impairment of goodwill and other intangible assets	-	410	1,677
Total operating expenses	70,836	57,689	51,673
Income from operations	22,382	8,900	2,611
Interest and other income, net	2,960	3,062	2,743
Income before income taxes	25,342	11,962	5,354
Income tax expense	6,463	3,258	1,944
Net income	\$ 18,879	\$ 8,704	\$ 3,410
Earnings per share:			
Basic	\$ 0.31	\$ 0.15	\$ 0.06
Diluted	\$ 0.29	\$ 0.14	\$ 0.06
Weighted average number of common and common equivalent shares outstanding:			
Basic	60,687	58,344	56,902
Diluted	64,745	62,227	60,609

⁽¹⁾ Stock-based compensation included in:

Cost of revenues	\$ 30	\$ 157	\$ 398
Research and development	271	1,316	2,864
Sales and marketing	80	166	1,385
General and administrative	38	280	658
	\$ 419	\$ 1,919	\$ 5,305

The accompanying notes are an integral part of these consolidated financial statements

IXIA

Consolidated Statements of Shareholders' Equity (in thousands)

	Common Stock		Additional	Deferred	Retained	
	Shares	Amount	Paid-In Capital	Stock-based Compensation	Earnings	Total
Balance as of December 31, 2001	55,810	\$ 77,764	\$ 46,933	\$ (9,418)	\$ 22,542	\$ 137,821
Net income					3,410	3,410
Exercise of stock options and employee stock purchase plan options	1,785	1,442				1,442
Deferred stock-based compensation			(127)	127		-
Amortization of deferred stock- based compensation				5,840		5,840
Forfeiture of stock options			(950)	415		(535)
Stock option tax benefit			1,189			1,189
Balance as of December 31, 2002	57,595	79,206	47,045	(3,036)	25,952	149,167
Net income					8,704	8,704
Exercise of stock options and employee stock purchase plan options	2,047	4,842				4,842
Amortization of deferred stock- based compensation				2,414		2,414
Forfeiture of stock options			(698)	203		(495)
Stock option tax benefit and other			2,422			2,422
Balance as of December 31, 2003	59,642	84,048	48,769	(419)	34,656	167,054
Net income					18,879	18,879
Exercise of stock options and employee stock purchase plan options	2,510	12,333				12,333
Issuance of common stock in connection with acquisition	307	3,763				3,763
Amortization of deferred stock- based compensation				419		419
Stock option tax benefit and other			4,478			4,478
Balance as of December 31, 2004	62,459	\$ 100,144	\$ 53,247	\$ -	\$ 53,535	\$ 206,926

The accompanying notes are an integral part of these consolidated financial statements

IXIA

Consolidated Statements of Cash Flows (in thousands)

	Year Ended December 31,		
	2004	2003	2002
Cash flows from operating activities:			
Net income	\$ 18,879	\$ 8,704	\$ 3,410
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	3,418	4,388	4,525
Amortization of intangible assets	4,576	2,255	945
Allowance for doubtful accounts	432	249	(306)
Stock-based compensation	419	1,919	5,305
Deferred income taxes	719	(1,438)	(2,132)
Impairment of goodwill and other intangible assets	-	410	1,677
Changes in operating assets and liabilities, net of effect of acquisitions:			
Accounts receivable	(5,130)	(8,019)	(1,511)
Inventories	(1,002)	(464)	(1,805)
Income taxes receivable	315	(2,011)	3,262
Prepaid expenses and other current assets	(696)	(85)	(1,142)
Other assets	6	(53)	(351)
Accounts payable	432	(154)	(522)
Accrued expenses	(89)	4,776	732
Deferred revenue	1,320	3,478	83
Income taxes payable	5,843	3,733	2,052
Net cash provided by operating activities	29,442	17,688	14,222
Cash flows from investing activities:			
Purchases of property and equipment	(8,707)	(4,233)	(4,712)
Purchases of available-for-sale securities	(82,551)	(27,125)	(18,810)
Proceeds from available-for-sale securities	47,750	20,150	13,685
Purchases of held-to-maturity securities	(24,181)	(53,505)	(89,996)
Proceeds from held-to-maturity securities	29,000	36,646	26,640
Purchases of technology and other intangible assets	(1,447)	(457)	(217)
Payments in connection with acquisitions	(6,389)	(18,138)	(5,157)
Net cash used in investing activities	(46,525)	(46,662)	(78,567)
Cash flows from financing activities:			
Exercise of stock options and employee stock purchase plan options	12,333	4,842	1,442
Net cash provided by financing activities	12,333	4,842	1,442
Net decrease in cash and cash equivalents	(4,750)	(24,132)	(62,903)
Cash and cash equivalents at beginning of year	21,133	45,265	108,168
Cash and cash equivalents at end of year	\$ 16,383	\$ 21,133	\$ 45,265
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Income taxes	\$ 2,109	\$ 2,991	\$ 450
Non-cash activities:			
Common stock issued in connection with acquisition	\$ 3,763	\$ -	\$ -

The accompanying notes are an integral part of these consolidated financial statements

1. Business and Summary of Significant Accounting Policies

Business

Ixia (the "Company") was incorporated on May 27, 1997 as a California corporation. The Company is a provider of technology and systems that allow customers to test and measure the performance, functionality, and conformance of Internet Protocol (IP) equipment and networks, and the applications that run over them. The Company's solutions generate, capture, characterize, and analyze high volumes of realistic network and application traffic, exposing problems, assessing performance, and verifying conformance to industry specifications. The Company offers a single hardware platform with interchangeable interfaces, utilizing a single set of applications and Application Programming Interfaces (APIs) which allows customers to create a fully integrated, easy-to-use test bed. The networks the Company's systems analyze include Ethernet networks operating at speeds of up to 10 gigabits per second, which carry data traffic over optical fiber or electrical cable. Other networks include Packet over SONET networks operating at speeds of up to 10 gigabits per second which transmit information over high-speed optical links and Asynchronous Transfer Mode (ATM) networks, operating at speeds of up to 622 megabits per second. The Company's telephony test suite is used to test and verify traditional Time-Division Multiplexing (TDM) voice based networks and Voice over IP technology, devices, and systems. Customers also use the Company's performance applications to test and verify web, Internet, security, and business applications.

Use of Estimates

In the normal course of preparing financial statements in conformity with accounting principles generally accepted in the United States, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Consolidation

All subsidiaries are consolidated as they are 100% owned by the Company. All significant intercompany transactions and accounts are eliminated in consolidation.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. Cash and cash equivalents are carried at cost, which approximates fair value. The Company generally places funds that are in excess of current needs in high credit quality instruments such as money market accounts. There are no restrictions on the use of cash and investments.

Fair Value of Financial Instruments

The Company's financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and other liabilities are carried at cost, which approximates their fair values because of the short-term maturity of these instruments and the relative stability of interest rates.

Investments in Marketable Securities

Management determines the appropriate classification of marketable securities at the time of purchase and reevaluates such designation as of each balance sheet date. Held-to-maturity securities are carried at amortized cost, which approximates fair value. Amortization of the purchase discounts and premiums is included in interest and other income, net. Available-for-sale securities are stated at fair value as determined by the most recently traded market price of each security at the balance sheet date. The net unrealized gains or losses on available-for-sale securities are reported as a separate component of accumulated other comprehensive income, net of tax. The specific identification method is used to compute realized gains and losses on the Company's marketable securities. To date, realized gains and losses on the Company's marketable securities and unrealized gains and losses on the Company's available-for-sale securities have not been significant.

The Company's held-to-maturity securities as of December 31, 2004 and 2003 consisted primarily of U.S. government, federal agency and corporate debt securities. As of December 31, 2004 and 2003, the Company's available-for-sale securities consisted primarily of high-grade auction rate securities with reset periods of generally 35 days or less. The Company regularly monitors and evaluates the realizable value of its marketable securities. Declines in value judged to be other than temporary were not material to the Company's results of operations in any period presented.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is based on the best estimate of the amount of probable credit losses in existing accounts receivable. The allowance for doubtful accounts is determined based on historical write-off experience, current customer information and other relevant data. The Company reviews the allowance for doubtful accounts monthly. Past due balances of 60 days and over are reviewed individually for collectibility. Account balances are charged off against the allowance when management believes it is probable the receivable will not be recovered. The Company does not have any off-balance-sheet credit exposure related to its customers.

Inventories

Inventories are goods held for sales in the normal course of business. Inventories are stated at the lower of cost (first-in, first-out) or market. The inventory balance is segregated between raw materials, work in process ("WIP") and finished goods. Raw materials are low level components, many of which are purchased from vendors, WIP is partially assembled products and finished goods are products that are ready to be shipped to end customers. Consideration is given to inventory shipped and received near the end of a period and the transaction is recorded when transfer of title occurs. Management regularly evaluates inventory for obsolescence and adjusts to net realizable value based on inventory that is obsolete or in excess of current demand.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets, ranging from two to seven years. Useful lives are evaluated regularly by management in order to determine recoverability in light of current technological conditions. Repairs and maintenance are charged to expense as incurred while renewals and improvements are capitalized. Upon the sale or retirement of property and equipment, the accounts are relieved of the cost and the related accumulated depreciation, with any resulting gain or loss included in the Statement of Income.

Amortization of Intangible Assets and Goodwill Impairment

The Company applies Statement of Financial Accounting Standards ("SFAS") 142, "Goodwill and Other Intangible Assets," to purchased intangible assets, which are carried at cost less accumulated amortization. Cost or purchase price is determined based on the amount paid to the seller (both in cash and in value of the Company's stock), liabilities assumed and transaction costs. The value of intangible assets is determined using valuation techniques such as the discounted cash flow method. In the case of a purchase of a business, the purchase price is allocated to the various identifiable assets, including intangibles, based on their respective fair values, with any remaining amount being assigned to goodwill. In the case of an asset purchase, any excess purchase price is allocated ratably based on the respective fair market values of the identifiable assets. Amortization of purchased technology is computed using the greater of (a) the ratio of current revenues to the total of current and anticipated future revenues or (b) the straight-line method over the remaining estimated economic life. Amortization of other intangible assets is computed using the straight-line method over the economic lives of the respective assets. The economic useful lives are determined based on comparison of similar technologies in the industry, historical experience and management expectation. Goodwill is carried at cost and is tested for impairment annually or whenever events or circumstances occur indicating that goodwill might be impaired. Other intangible assets are tested for impairment as circumstances arise in accordance with SFAS 144, "Accounting for the Impairment of Disposal of Long-Lived Assets." Impairment losses are recorded to the extent that the carrying value of the goodwill exceeds the fair value.

Litigation

The Company is currently involved in certain legal proceedings. The Company accrues for losses when the loss is deemed probable and the liability can reasonably be estimated. Where a liability is probable and there is a range of estimated loss with no best estimate in the range, the Company records the minimum estimated liability related to the claim. As additional information becomes available, the Company assesses the potential liability related to the Company's pending litigation and revises its estimates.

Product Warranty Costs

The Company generally warrants its products for up to one year after sale and provides for estimated future warranty costs at the time revenue is recognized. Accrued product warranty costs are included as a component of accrued expenses on the accompanying Balance Sheets and are not material.

Revenue Recognition

The Company's revenues consist primarily of hardware and software product sales. In some instances the Company's software products are installed and run on other companies' hardware. At other times, software products are installed on the Company's hardware products and are an integral part of the functionality of the hardware. As such, the Company applies the provisions of the American Institute of Certified Public Accountants ("AICPA") Statement of Position ("SOP") 97-2, "Software Revenue Recognition."

The Company's products are fully functional at the time of shipment and do not require significant production, modification or customization. As such, revenue from product sales is recognized upon shipment provided that (1) a purchase order has been received or a contract has been executed; (2) title has transferred; (3) the fee is fixed and determinable; and (4) collectibility is deemed probable. When a sale involves multiple elements (typically sales of products that include warranty support and services), the entire fee from the arrangement is allocated to each respective element based on vendor-specific objective evidence ("VSOE") of fair value in accordance with SOP 97-2. The Company determines VSOE based on sales prices charged to customers when the same element is sold separately or based upon a renewal rate. Revenue is recognized on multiple element arrangements as each element is delivered, provided the other revenue recognition criteria noted above have also been met. Warranty support and service revenue is deferred and recognized ratably over the period during which the services are to be performed.

The Company uses distributors to market and sell its systems primarily outside the United States and Japan. Due to the broad range of features and options available with the Company's hardware and software products, distributors generally do not stock the Company's products and typically place orders with the Company after receiving an order from an end customer. These distributors receive business terms of sale similar to those received by the Company's other customers.

Research and Development

Research and development expenses consist primarily of salaries and related personnel and consulting costs related to the design, development, testing and enhancements of our systems. Costs related to research and development activities, including those incurred to establish the technological feasibility of a software product, are expensed as incurred. If technological feasibility is established, all development costs incurred until general product release are subject to capitalization. To date, the establishment of technological feasibility of the Company's products and general release have substantially coincided. As a result, the Company has not capitalized any development costs.

Software Developed for Internal Use

The Company capitalizes costs of software, consulting services, hardware and payroll-related costs incurred to purchase or develop internal-use software. The Company expenses costs incurred during preliminary project assessment, research and development, re-engineering, training and application maintenance phases. To date, capitalized internal use software costs have not been significant.

Advertising

Advertising costs are expensed as incurred. Advertising costs were \$918,000, \$867,000 and \$601,000 for the years ended December 31, 2004, 2003 and 2002, respectively.

Stock-Based Compensation

At December 31, 2004, the Company has three stock-based employee and director compensation plans which are described more fully in Note 8. The Company accounts for its stock option plans in accordance with the provisions of Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees" and the related interpretations of FASB Interpretation ("FIN") No. 44, "Accounting for Certain Transactions Involving Stock Compensation." Accordingly, compensation expense related to employee stock options is recorded only if, on the date of the grant, the fair value of the underlying stock exceeds the exercise price. The Company accounts for stock based awards issued to non-employees in accordance with the provisions of SFAS 123, "Accounting for Stock-Based Compensation" and Emerging Issues Task Force ("EITF") 96-18, "Accounting for Equity Instruments that are Issued to Other Than Employees."

The Company calculated the fair value of each option grant on the respective dates of grant using the Black-Scholes option pricing model as prescribed by SFAS 123 using the following assumptions:

	Year Ended December 31,		
	2004	2003	2002
Expected life (in years)	3.7	4.0	5.0
Risk-free interest rates	3.1%	3.0%	3.0%
Dividend yield	0.0%	0.0%	0.0%
Expected volatility	92.8%	108.0%	110.0%

The following table illustrates the effect on stock-based compensation, net income and earnings per share on a pro forma basis as if the Company had applied the fair value recognition provisions of SFAS 123 to stock-based employee compensation (in thousands, except per share data):

	Year Ended December 31,		
	2004	2003	2002
Stock-based compensation:			
As reported	\$ 419	\$ 1,919	\$ 5,305
Additional stock-based compensation expense, net of taxes, determined under the fair value method	13,612	10,506	13,169
Pro forma	\$ 14,031	\$ 12,425	\$ 18,474
Net income (loss):			
As reported	\$ 18,879	\$ 8,704	\$ 3,410
Additional stock-based compensation expense, net of taxes, determined under the fair value method	13,612	10,506	13,169
Pro forma	\$ 5,267	\$ (1,802)	\$ (9,759)
Basic earnings (loss) per share:			
As reported	\$ 0.31	\$ 0.15	\$ 0.06
Pro forma	\$ 0.09	\$ (0.03)	\$ (0.17)
Diluted earnings (loss) per share:			
As reported	\$ 0.29	\$ 0.14	\$ 0.06
Pro forma	\$ 0.08	\$ (0.03)	\$ (0.17)

For the years ended December 31, 2003 and 2002, the pro forma net loss has been adjusted for additional stock-based compensation expenses, net of taxes, by approximately \$472,000 and \$576,000, respectively, to include the effects of the Company's employee stock purchase plan and the tax effects of certain stock-based compensation transactions.

Income Taxes

The Company accounts for income taxes using the liability method. Deferred taxes are determined based on the differences between the financial statement and tax bases of assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

Earnings Per Share

Basic earnings per share is computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed using the weighted-average number of common shares and dilutive potential common shares outstanding during the period. Dilutive potential common shares primarily consist of employee stock options.

Foreign Currency Translation

Assets and liabilities of non-U.S. subsidiaries that operate in a local currency environment are translated to U.S. dollars at exchange rates in effect at the balance sheet date, with the resulting translation adjustments included as a separate component in accumulated other comprehensive income, which have not been significant to date. Income and expense accounts are translated at average exchange rates during the year. Where the U.S. dollar is the functional currency, certain balance sheet and income statement accounts are remeasured at historical exchange rates and translation adjustments from the remeasurement of the local currency amounts to U.S. dollars are included in interest and other income, net. Gains and losses resulting from foreign currency transactions, the amounts of which have not been significant to date, are included in interest and other income, net.

Comprehensive Income

The Company has adopted the provisions of SFAS 130, "Reporting Comprehensive Income." SFAS 130 establishes standards for reporting comprehensive income and its components in financial statements. Comprehensive income, as defined, includes all changes in equity (net assets) during a period from non-owner sources. To date, there have been no significant transactions that are required to be reported in comprehensive income, other than net income.

Segments

The Company has adopted the provisions of SFAS 131, "Disclosures about Segments of an Enterprise and Related Information." SFAS 131 establishes standards for the way companies report information about operating segments in annual financial statements. It also establishes standards for related disclosures about products and services, geographic areas and major customers. The Company has determined that it did not have any separately reportable business segments as of, and for the years ended, December 31, 2004, 2003 and 2002.

Reclassifications

Certain reclassifications have been made to prior years financial statements to conform to the current year presentation. The Company has reclassified certain auction rate securities, for which interest rates generally reset in less than 90 days, but for which the original maturity dates are longer than 90 days, from cash and cash equivalents to short-term marketable securities. This resulted in a reclassification from cash and cash equivalents to short-term marketable securities of approximately \$20.6 million on the December 31, 2003 balance sheet. For the years ended December 31, 2003 and 2002, before this revision in classification, net cash used in investing activities related to these current investments of \$7.0 million and \$5.1 million, respectively, were included in cash and cash equivalents in the consolidated statements of cash flows. This change in classification does not affect previously reported cash flows from operating or from financing activities in our previously reported consolidated statements of cash flows, or our previously reported consolidated statements of income for any period.

Recent Accounting Pronouncements

In February 2004, the FASB issued FASB Staff Position ("FSP") FIN 46(R)-1 "Reporting Variable Interests in Specified Assets of Variable Interest Entities under Paragraph 13 of FASB Interpretation No. 46 (Revised December 2003) ("FIN 46(R))", Consolidation of Variable Interest Entities." The FSP states that a specified asset of a variable interest entity and the liability secured by the asset should not be deemed a separate variable interest entity. The adoption of FIN 46(R)-1 did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In March 2004, the EITF reached a consensus on Issue 03-1, "The Meaning of Other-Than-Temporary Impairment and its Application to Certain Investments." EITF No. 03-1 requires disclosures about investments accounted for under SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," in an unrealized loss position and are designed to help financial statement users analyze a company's unrealized losses and better understand the basis for any management conclusion that the impairment is temporary. All new disclosures are effective for the annual reporting period ended December 31, 2004 and did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In June 2004, the FASB issued Emerging Issues Task Force Issue No. 02-14 ("EITF 02-14"), "Whether an Investor Should Apply the Equity Method of Accounting to Investments Other Than Common Stock." EITF 02-14 states that an investor should only apply the equity method of accounting when it has investments in either common stock or in-substance common stock of a corporation, provided that the investor has the ability to exercise significant influence over the operating and financial policies of the investee. The adoption of EITF 02-14 did not have a material impact on the Company's consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued FASB Staff Position No. 109-2 ("FAS 109-2"), "Accounting and Disclosure Guidance for the Foreign Earnings Repatriation Provision within the American Jobs Creations Act of 2004." The American Jobs Creations Act ("AJCA") provides an 85% dividends received deduction on the repatriation of certain foreign earnings to a U.S. taxpayer provided certain criteria are met. FAS 109-2 provides accounting and disclosure guidance for the repatriation provision. The Company does not expect the adoption of FAS 109-2 to have material impact on the Company's consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued SFAS 123 (revised 2004), "Share-Based Payment" ("SFAS 123R"), which replaces SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123") and supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees." SFAS 123R requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values, beginning with the first interim or annual period after June 15, 2005. The pro forma disclosures previously permitted under SFAS 123, no longer will be an alternative to financial statement recognition. The Company intends to adopt SFAS 123R in the third quarter beginning July 1, 2005. Under SFAS 123R, the Company must determine the appropriate fair value model to be used for valuing share-based payments, the amortization method for compensation cost and the transition method to be used at date of adoption. The Company is evaluating the requirements of SFAS 123R and, given that the Company has historically granted a significant amount of stock options to employees, expect that the adoption of SFAS 123R will have a material adverse impact on the Company's consolidated results of operations and earnings per share. The Company has not yet determined the fair value model or transition method that the Company will adopt, or the effect of adopting SFAS 123R including whether the adoption will result in amounts that are similar to the current pro forma disclosures under SFAS 123.

2. Concentrations

Credit Risk

Financial instruments that subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and trade accounts receivable. The Company maintains its cash and cash equivalents with reputable financial institutions, and at times, cash balances may be in excess of FDIC insurance limits. The Company extends differing levels of credit to customers, does not generally require collateral, and maintains reserves for potential credit losses based upon the expected collectibility of accounts receivable.

For the years ended December 31, 2004, 2003 and 2002, only one customer comprised more than 10% of net revenues as follows (in thousands, except percentages):

	Year Ended December 31,		
	2004	2003	2002
Amount of net revenues	\$ 37,165	\$ 24,316	\$ 23,115
As a percentage of total net revenues	32%	29%	34%

As of December 31, 2004 and 2003, the Company had receivable balances from the customer approximating 22% and 20%, respectively, of total accounts receivable.

International Revenues

Net revenues from international product shipments were \$30.8 million in 2004, \$25.3 million in 2003 and \$14.3 million in 2002.

Sources of Supply

The Company currently buys a number of key components of its products from a limited number of suppliers. Although there are a limited number of manufacturers of these components, management believes that other suppliers could provide similar components on comparable terms. A change in suppliers, however, could cause a delay in manufacturing and a possible loss of sales, which could affect consolidated operating results adversely.

3. Selected Balance Sheet Data (in thousands)

Accounts Receivable, Net

Accounts receivable, net consisted of the following:

	December 31, 2004	December 31, 2003
Trade accounts receivable	\$ 22,911	\$ 17,531
Allowance for doubtful accounts	(842)	(410)
	<u>\$ 22,069</u>	<u>\$ 17,121</u>

Allowance for doubtful accounts was adjusted during the years presented as follows:

Year Ended December 31,	Balance at Beginning of Period	Charged to Cost and Expenses	Reversals to Cost and Expenses	Deductions	Balance at End of Period
2004	\$ 410	\$ 450	\$ -	\$ (18)	\$ 842
2003	161	300	-	(51)	410
2002	467	200	(100)	(406)	161

Investments in Marketable Securities

Investments in marketable securities as of December 31, 2004 consisted of the following:

	Carrying Value	Fair Value
Available-for-sale - short-term:		
Auction rate securities	\$ 55,376	\$ 55,376
Held-to-maturity - maturities of less than one year:		
U.S. government and federal agency debt securities	2,000	2,005
Corporate debt securities	24,381	24,400
	81,757	81,781
Held-to-maturity - maturities of one to five years:		
U.S. government and federal agency debt securities	28,928	28,729
Corporate debt securities	20,087	19,878
	49,015	48,607
Total investments in marketable securities	\$ 130,772	\$ 130,388

Investments in marketable securities as of December 31, 2003 consisted of the following:

	Carrying Value	Fair Value
Available-for-sale - short-term:		
Auction rate securities	\$ 20,575	\$ 20,575
Held-to-maturity - maturities of less than one year:		
Corporate debt securities	22,143	22,311
	42,718	42,886
Held-to-maturity - maturities of one to five years:		
U.S. government and federal agency debt securities	22,946	22,991
Corporate debt securities	35,126	35,740
	58,072	58,731
Total investments in marketable securities	\$ 100,790	\$ 101,617

Inventories

Inventories consisted of the following:

	December 31, 2004	December 31, 2003
Raw materials	\$ 1,665	\$ 2,085
Work in process	2,808	1,718
Finished goods	2,196	1,782
	\$ 6,669	\$ 5,585

Property and Equipment, Net
Property and equipment, net consisted of the following:

	Useful Life (in years)	December 31, 2004	December 31, 2003
Computer equipment	3	\$ 3,343	\$ 2,104
Computer software	3	2,669	1,356
Demonstration equipment	2	8,318	6,432
Development equipment	5	6,270	4,453
Furniture and other equipment	5	7,447	5,234
Leasehold improvements	7	1,074	703
		29,121	20,282
Accumulated depreciation		(16,853)	(13,375)
		<u>\$ 12,268</u>	<u>\$ 6,907</u>

Accrued Expenses
Accrued expenses consisted of the following:

	December 31, 2004	December 31, 2003
Accrued payroll	\$ 1,430	\$ 1,121
Accrued commissions	966	1,365
Accrued bonuses	1,756	2,063
Accrued sales tax	332	462
Accrued vacation	1,169	1,056
Employee stock purchase plan payroll deductions	451	354
Accrued royalties	542	948
Accrued G3 Nova earnout (Note 4)	1,856	-
NetIQ purchase option accrual (Note 4)	2,500	-
Other	2,179	1,456
	<u>\$ 13,181</u>	<u>\$ 8,825</u>

4. Acquisitions

Chariot Product Line

On July 7, 2003, the Company acquired from NetIQ Corporation (i) a perpetual license to the source code for NetIQ's Chariot products for the development, manufacture, marketing and distribution of derivative products, (ii) certain additional intellectual property rights associated with the Chariot products and (iii) exclusive U.S. and Canadian distribution rights for NetIQ's existing Chariot products through December 31, 2004. The Chariot products allow users to simulate full-scale enterprise networks with a mixture of traffic types, including Voice over IP, Multicast, Oracle and SAP business transactions.

These rights were acquired for a total price of \$18.1 million, which consisted of a \$17.5 million payment to NetIQ and acquisition-related expenses. The Company also guaranteed a minimum royalty on sales of NetIQ's existing Chariot products of \$500,000 each quarter, subject to certain credits, for six consecutive quarters beginning with the September 30, 2003 quarter. The final minimum quarterly royalty was accrued as of December 31, 2004 and paid subsequent to year end. Between September 1, 2004 and January 15, 2005, the Company had the option to purchase the remaining assets of NetIQ's Chariot business, including international distribution rights, for a cash payment of \$2.5 million.

The following table summarizes the estimated fair values of the assets acquired at the date of acquisition (in thousands):

Purchased technology	\$	16,561
Other intangible assets		<u>1,577</u>
Total assets acquired	\$	<u>18,138</u>

The acquired other intangible assets consisted of \$591,000 for trademark rights, \$395,000 for workforce and \$591,000 for customer relationships. The purchased technology is being amortized using the greater of (a) the ratio of current revenues to the total of current and anticipated future revenues or (b) the straight-line method over the remaining estimated economic life of seven years. Other intangible assets are being amortized using a straight-line method over their expected useful lives of between 4 and 7 years.

Prior to December 31, 2004, management decided that the Company would exercise its option to purchase the remaining assets of the NetIQ Chariot business. Accordingly, the Company accrued the \$2.5 million option payment at December 31, 2004 and allocated the option amount based on the estimated fair values to such assets, primarily purchased technology.

G3 Nova Technology, Inc.

On February 20, 2004, the Company completed the acquisition of all of the outstanding capital stock of G3 Nova Technology, Inc. ("G3 Nova"). G3 Nova develops and sells Voice over IP test tools for enterprise call centers, communication networks and network devices. This acquisition opens new growth opportunities for the Company by allowing the Company to offer a broader portfolio of products to customers, as well as gain access to new customer segments. The results of G3 Nova's operations have been included in the consolidated financial statements since the acquisition date.

The G3 Nova purchase price of \$9.5 million included \$5.5 million in cash, 307,020 shares of the Company's common stock valued at \$3.8 million and legal and other acquisition costs of \$207,000. The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the date of acquisition (in thousands):

Current assets	\$	355
Property and equipment		131
Intangible assets		3,700
Goodwill		<u>7,285</u>
Total assets acquired		11,471
Current liabilities assumed		<u>(2,001)</u>
Net assets acquired	\$	<u>9,470</u>

Of the \$3.7 million of acquired intangible assets, \$2.5 million was assigned to acquired technology, \$1.0 million was assigned to customer contracts and relationships, and \$200,000 was assigned to a covenant not to compete. These intangible assets will be amortized using a straight-line method over their expected useful lives ranging from three to four and one half years. No goodwill is deductible for income tax purposes.

The purchase agreement also provided for a contingent earnout payment of up to \$2.5 million to be paid to the sellers based upon sales of G3 Nova products from July 2004 through June 2005. Based on orders received for G3 Nova products from July 2004 through December 2004, management believes that it is beyond a reasonable doubt that the contingent payment will be earned. As such, the Company has recorded the entire contingent payment of \$2.5 million in its December 31, 2004 financial statements. As of December 31, 2004, \$644,000 of the contingent payment had been paid with the remaining balance of \$1.9 million included in accrued expenses on the Balance Sheet. Subsequent to December 31, 2004, the remaining contingent earnout of \$1.9 million was paid. The total contingent payment of \$2.5 million has been recorded as additional goodwill.

The following table summarizes the pro forma revenue, net income and earnings per share had the G3 Nova acquisition occurred on January 1, 2004 and 2003, respectively (in thousands, except per share data):

	Year Ended December 31,	
	2004	2003
Net revenues	\$ 117,304	\$ 86,346
Net income	18,520	8,400
Earnings per share:		
Basic	\$ 0.30	\$ 0.14
Diluted	0.29	0.13

The pro forma results have been prepared for comparative purposes only and include adjustments for amortization of identifiable intangible assets resulting from the acquisition. These results do not purport to be indicative of the results of operations which would have resulted had the acquisition been in effect as of January 1, 2003 or the future results of operations of the combined organization.

5. Goodwill and Other Intangible Assets

Effective January 1, 2002, the Company adopted SFAS 142, "Goodwill and Other Intangible Assets" and SFAS 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 142 established new standards related to how acquired goodwill and other intangible assets are to be recorded upon their acquisition as well as how they are to be accounted for after they have been initially recognized in the financial statements. SFAS 144 established new standards requiring that long-lived assets that are to be disposed of by sale be measured at the lower of book value or fair value less costs to sell and also set forth requirements for recognizing and measuring impairment losses on certain long-lived assets to be held or used.

The following table presents 2004 details of the Company's total purchased intangible assets (in thousands):

Description	Gross	Accumulated Amortization	Accumulated Impairment	Net
Goodwill	\$ 11,377	\$ -	\$ -	\$ 11,377
Other intangible assets:				
Technology	\$ 26,352	\$ (5,711)	\$ -	\$ 20,641
Non-compete	792	(609)	-	183
Trademark	676	(127)	-	549
Workforce	395	(148)	-	247
Customer relationships	976	(285)	-	691
Other	1,081	(361)	-	720
	\$ 30,272	\$ (7,241)	\$ -	\$ 23,031

During 2004, the Company removed the cost, accumulated amortization and accumulated impairment balances from the balance sheet related to the Cairnis, Inc. intangible assets, including goodwill, which amounted to \$2.6 million, \$590,000 and \$2.1 million, respectively. These balances netted to zero on the balance sheet prior to removal.

The following table presents 2003 details of the Company's total purchased intangible assets (in thousands):

Description	Gross		Accumulated Amortization		Accumulated Impairment		Net
Goodwill	\$	2,451	\$	-	\$	(859)	\$ 1,592
Other intangible assets:							
Technology	\$	21,281	\$	(2,435)	\$	(1,098)	\$ 17,748
Non-compete		856		(573)		(61)	222
Trademark		591		(41)		-	550
Workforce		395		(49)		-	346
Customer relationships		591		(72)		-	519
Other		660		(85)		-	575
	\$	24,374	\$	(3,255)	\$	(1,159)	\$ 19,960

Amortization expense for the years ended December 31, 2004, 2003 and 2002 was \$4.6 million, \$2.3 million and \$945,000, respectively.

The estimated future amortization expense of purchased intangible assets as of December 31, 2004 is as follows (in thousands):

2005	\$	4,997
2006		4,939
2007		4,590
2008		3,922
Thereafter		4,583
	\$	23,031

Due to the decline in business conditions in 2002, the Company restructured its business and realigned resources to focus on profit contribution, high-growth markets and core opportunities. As a result, the Company recorded an impairment charge of \$1.7 million related primarily to the impairment of goodwill and purchased intangible assets related to the October 2001 acquisition of Caimis, Inc. The impairment charge was measured as the amount by which the carrying amount exceeded the present value of the estimated future cash flows for goodwill and purchased intangible assets. In the second half of 2003, the interest of potential customers in products related to the Caimis acquisition diminished. As the Company does not anticipate further development or marketing efforts related to these products to generate additional demand, the Company recorded an impairment charge of \$410,000 for the remaining technology related to Caimis, Inc. based on estimates that the carrying value exceeded the present value of future cash flows.

6. Income Taxes

Income tax expense consisted of the following (in thousands):

	Year Ended December 31,		
	2004	2003	2002
Current:			
Federal	\$ 4,335	\$ 3,643	\$ 3,087
State	1,571	1,381	1,003
Foreign	79	195	-
Deferred:			
Federal	2,233	(668)	(928)
State	(1,700)	(1,338)	(1,173)
Foreign	(55)	45	(45)
	\$ 6,463	\$ 3,258	\$ 1,944

The net effective income tax rate differed from the federal statutory income tax rate as follows (in thousands):

	Year Ended December 31,		
	2004	2003	2002
Federal statutory expense	\$ 8,867	\$ 4,215	\$ 1,874
State taxes, net of federal benefit	113	328	309
Research and development credits	(1,475)	(901)	(1,627)
Stock-based compensation	(968)	(407)	1,163
Impairment of goodwill	-	-	334
Other	(74)	23	(109)
Income tax expense	\$ 6,463	\$ 3,258	\$ 1,944
Net effective income tax rate	25.5%	27.2%	36.3%

The primary components of temporary differences that gave rise to deferred taxes were as follows (in thousands):

	December 31, 2004	December 31, 2003
Deferred tax assets:		
State income taxes	\$ 151	\$ 60
Allowance for doubtful accounts	359	159
Depreciation and amortization	-	680
Research and development credit carryforward	4,696	1,261
Warranty accruals	58	45
Deferred revenue	531	2,105
Stock-based compensation	1,357	1,421
Inventory adjustments	833	628
Net operating loss carryforward	-	297
Other	569	485
Total deferred tax assets	8,554	7,141
Deferred tax liabilities:		
Depreciation and amortization	(3,411)	-
Net deferred taxes	\$ 5,143	\$ 7,141

Realization of the December 31, 2004 deferred tax assets is dependent on the Company generating sufficient taxable income in the future. Although realization is not assured, the Company believes it is more likely than not that the deferred tax assets will be realized. The amount of the deferred tax assets considered realizable, however, could be reduced in the future if estimates of future taxable income are reduced.

As of December 31, 2004, the Company had gross federal and state research and development credit carryforwards of approximately \$6.1 million which begin to expire in 2021.

Cumulative undistributed earnings of foreign subsidiaries for which no deferred income taxes have been provided approximated \$463,000 at December 31, 2004. Deferred income taxes on these earnings have not been provided as these accounts are considered to be permanent in duration.

7. Commitments and Contingencies

Leases

The Company leases its facilities under noncancelable operating leases for varying periods through May 2011, excluding options to renew. The following are the future minimum commitments under these leases (in thousands):

	Year Ending December 31,
2005	\$ 2,555
2006	2,534
2007	2,421
2008	998
2009	196
Thereafter	197
	<u>\$ 8,901</u>

Rent expense for the years ended December 31, 2004, 2003 and 2002 was approximately \$2.3 million, \$1.8 million and \$1.6 million, respectively.

Litigation

From time to time, certain legal actions may arise in the ordinary course of the Company's business. The Company believes that the ultimate outcome of its ongoing actions will not have a material adverse effect on its financial position, results of operations or cash flows.

Indemnifications

In the normal course of business, the Company provides indemnifications of varying scope to customers against claims of intellectual property infringement made by third parties arising from the use of its products. Historically, costs related to these indemnification provisions have not been significant and the Company is unable to estimate the maximum potential impact of these indemnification provisions on its future results of operations.

8. Shareholders' Equity

Stock Options

The Company's 1997 Stock Option Plan, as amended (the "1997 Plan"), provides for the issuance of stock-based awards to qualified employees, employee directors and consultants of the Company. The stock-based awards may include incentive stock options or nonqualified stock options. Options become exercisable over a vesting period as determined by the Board of Directors and expire over terms not exceeding 10 years from the date of grant. The exercise price for options granted under the 1997 Plan may not be granted at less than 100% of the fair market value of the Company's common stock on the date of grant (110% if granted to an employee who owns more than 10% of the voting shares of the outstanding stock). Options generally vest over a four-year period. In the event the holder ceases to be employed by the Company, all unvested options are forfeited and all vested options may be exercised within a period of up to 30 days after optionee's termination for cause, up to three months after termination other than for cause or as a result of death or disability, or up to six months after termination as a result of disability or death. As of December 31, 2004, the Company has reserved 28.5 million shares of its common stock for issuance under the 1997 Plan, 7.0 million shares of which were available for future grant as of such date.

The Company's Director Plan, as amended (the "Director Plan"), provides for the issuance of stock-based awards to Company non-employee directors. The Company has reserved a total of 400,000 shares of common stock for issuance under the plan. The option grants under the plan are automatic and non-discretionary, and the exercise price of the options is 100% of the fair market value of our common stock on the grant date. The plan provides for an initial grant to a non-employee director of an option to purchase at least 25,000 and up to 35,000 shares of common stock upon the director's appointment to the board, which vest and become exercisable in eight equal quarterly installments. The plan also provides for each non-employee director to be granted an option to purchase 10,000 shares of common stock upon the director's re-election to the board at an annual meeting of shareholders, provided the director has served as a non-employee director for at least six months preceding the date of the annual meeting. These subsequent grants vest and become exercisable in four equal quarterly installments commencing on the last day of the calendar quarter in which the option is granted. The plan will terminate in September 2010, unless terminated sooner by the Board of Directors. As of December 31, 2004, the Director Plan had 325,000 shares available for future grant.

The following table summarizes information relating to stock option activity under the above plans for the years ended December 31, 2004, 2003 and 2002 (in thousands, except per share data):

	Outstanding Options Number of Shares	Weighted Average Exercise Price Per Share
Options Outstanding as of December 31, 2001	\$ 10,858	\$ 5.13
Granted	3,213	6.85
Exercised	(1,589)	0.36
Canceled	(793)	8.60
Options Outstanding as of December 31, 2002	11,689	6.02
Granted	1,858	7.31
Exercised	(1,603)	2.13
Canceled	(932)	8.18
Options Outstanding as of December 31, 2003	11,012	6.62
Granted	3,456	11.21
Exercised	(1,859)	5.33
Canceled	(663)	8.49
Options Outstanding as of December 31, 2004	11,946	\$ 8.04

The weighted-average grant-date fair value of options granted during 2004, 2003 and 2002 was \$7.07, \$5.08 and \$5.41 per share, respectively. The fair value was determined using the Black-Scholes option pricing model.

Deferred stock-based compensation, recorded in the shareholders' equity section of the balance sheet, represents the difference between the exercise price of the options and the deemed fair value of the Company's common stock for accounting purposes at the date of grant. The deferred stock-based compensation is recognized as stock-based compensation expense in the statements of income over the related vesting periods of the options. For the years ended December 31, 2004 and 2003, deferred stock-based compensation decreased by \$0 and \$203,000, respectively, as a result of the forfeiture of stock options and changes in the market value of the Company's common stock that affected certain equity instruments which received variable accounting treatment.

For the years ended December 31, 2004, 2003 and 2002, amortization of deferred stock-based compensation related to stock option grants included in the accompanying statements of income was approximately \$419,000, \$1.9 million and \$5.3 million, respectively.

Additional information with respect to stock options outstanding as of December 31, 2004 is as follows (in thousands, except years and per share data):

Range of Exercise Price	Number Outstanding	Options Outstanding		Options Exercisable	
		Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Outstanding	Weighted Average Exercise Price
\$ 0.02 to \$ 2.50	2,094	4.9	\$ 0.75	2,094	\$ 0.75
3.00 to 7.00	2,383	4.6	5.15	1,246	5.25
7.08 to 9.00	2,027	6.6	8.20	1,013	8.38
9.28 to 11.63	2,096	6.0	10.35	845	10.12
11.70 to 12.69	2,294	6.4	12.09	674	12.35
12.74 to 21.50	1,052	6.5	15.42	717	16.0
\$ 0.02 to \$ 21.50	11,946	5.8	\$ 8.04	6,589	\$ 6.82

There were approximately 5.7 million options exercisable with a weighted-average exercise price of \$5.77 at December 31, 2003. There were approximately 4.6 million options exercisable with a weighted-average exercise price of \$4.89 at December 31, 2002.

Employee Stock Purchase Plan

The employee stock purchase plan was adopted and approved in September 2000. The plan became effective upon the closing of the Company's initial public offering in October 2000. The Company has reserved a total of 1.5 million shares of common stock for issuance under the plan, together with the potential for an annual increase in the number of shares reserved under the plan on May 1 of each year. As of December 31, 2004, 143,000 shares were available for future issuance. For the years ended December 31, 2004 and 2003, 651,000 and 444,000 shares, respectively, were issued under the plan.

The plan permits eligible employees to purchase common stock, subject to limitations as set forth in the plan, through payroll deductions which may not exceed the lesser of 15% of an employee's compensation or \$25,000 per annum.

Unless the Board of Directors determines otherwise, the plan is implemented in a series of overlapping 24-month offering periods with new offering periods commencing on May 1 and November 1 of each year. Each offering period is divided into four consecutive six-month purchase periods. All participants in an offering period are granted an option on the first day of the offering period, and the option is automatically exercised on the last day of each purchase period throughout the offering period. The purchase price of the Company's common stock for each purchase period within an offering period is 85% of the lesser of the fair market value per share on the first trading day of the offering period or on the last trading day of the applicable purchase period, whichever is lower. If the fair market value per share on the last trading day of a purchase period is less than on the first day of the offering period, participants are automatically re-enrolled in a new offering period.

Warrants

As of December 31, 2004, there were warrants outstanding and exercisable to purchase 50,000 shares of common stock with an exercise price \$7.00 per share. The warrants expire in August 2007.

9. Retirement Plan

The Company provides a 401(k) Retirement Plan (the "Plan") to eligible employees who may authorize contributions up to IRS annual deferral limits to be invested in employee elected investment funds. As determined annually by the Board of Directors, the Company may contribute matching funds of 50% of the employee contributions up to \$2,500. These matching contributions vest based on the employee's years of service with the Company. For the years ended December 31, 2004, 2003 and 2002, the Company expensed and made contributions to the Plan in the amount of approximately \$478,000, \$492,000 and \$379,000, respectively.

10. Earnings Per Share

The following table sets forth the computation of basic and diluted net income per share for the periods indicated *(in thousands, except per share data)*:

	Year Ended December 31,		
	2004	2003	2002
Basic Presentation			
Numerator:			
Net income	\$ 18,879	\$ 8,704	\$ 3,410
Denominator:			
Weighted average common shares	60,687	58,363	56,996
Adjustment for common shares subject to repurchase	-	(19)	(94)
Adjusted weighted average common shares	60,687	58,344	56,902
Basic net income per share	\$ 0.31	\$ 0.15	\$ 0.06
Diluted presentation			
Denominator:			
Shares used above	60,687	58,344	56,902
Weighted average effect of dilutive securities:			
Stock options	4,058	3,864	3,613
Common shares subject to repurchase	-	19	94
Denominator for diluted calculation	64,745	62,227	60,609
Diluted net income per share	\$ 0.29	\$ 0.14	\$ 0.06

The diluted per share computations for the years ended December 31, 2004, 2003 and 2002, excludes employee stock options to purchase 3.6 million, 4.6 million and 5.9 million shares, respectively, which were antidilutive.

11. Related Party Transactions

Revenues from an affiliate of a company in which two directors of the Company are also directors totaled \$1.6 million for the year ended December 31, 2002. There were no significant related party transactions or receivables with respect to such company or its affiliates in the years ended December 31, 2004 and 2003.

12. Quarterly Financial Summary (Unaudited)

	Three Months Ended (in thousands, except per share data)							
	Dec. 31 2004	Sep. 30 2004	Jun. 30 2004	Mar. 31 2004	Dec. 31 2003	Sep. 30 2003	Jun. 30 2003	Mar. 31 2003
Statement of Income Data:								
Net revenues	\$ 35,162	\$ 30,092	\$ 26,811	\$ 24,913	\$ 23,049	\$ 21,635	\$ 20,036	\$ 18,813
Gross profit	28,253	23,874	21,228	19,863	17,928	16,894	16,263	15,504
Income before income taxes	9,330	6,610	5,142	4,260	3,324	3,226	3,286	2,126
Net income	7,572	4,739	3,546	3,022	2,313	2,413	2,466	1,512
Earning per share:								
Basic	\$ 0.12	\$ 0.08	\$ 0.06	\$ 0.05	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.03
Diluted	\$ 0.11	\$ 0.07	\$ 0.06	\$ 0.05	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.02

Corporate Information

Board of Directors Independent Accountants

Jean-Claude Asscher PricewaterhouseCoopers LLP
Member of the Board Los Angeles, California

Legal Counsel

Paul Ginsberg Bryan Cave LLP
President/Chief Executive Officer Santa Monica, California

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Robert W. Bass Common Stock
Executive Vice President
Locations The Company's common stock is
traded on the Nasdaq National
David Anderson Market under the symbol XXIA.
Senior Vice President
Northwest Sales and
Business Development

Web Site

Additional information about the
Company is available on its web
site at www.ixiacom.com
Cliff Hannel
Vice President
Recruitment and Strategy

Annual Meeting of Shareholders

Alan Amrod
President 9:00 AM, Thursday
Marketing May 19, 2005
Marriott Hotel
Tom Miller 30100 Agoura Road
Chief Financial Officer Agoura Hills, California 91301

Joseph A. Noble
Vice President
North Pacific Sales

XIA

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Transmittal: FEB 17 11:00

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